Med Trib 43

Medical Tribune and Medical News

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making rounds

RIGHT OF MINORS TO ABORTION without parental consent will be argued in Boston before 3-judge federal panel in December when new Mass. law requiring parental consent comes up for hearing on its constitutionality. Two 16-year-olds who wanted abortions sued on constitutional grounds and were given 10 day stay. While temporary stay applies only to them, other minors seeking abortion could seek similar restraints.

New

MUMPS - The West Virginia Health Dept. is hoping for $250,000 from the state legislature to combat an incidence of mumps several times that of the rest of the U.S. Problem has been relatively high cost of vaccine, and fact that Federal money for immunization programs is being cut 60%, health director Dr. N.H. Dyer told MT.

MOST FATAL AUTO CRASHES are not caused by "habitual offenders", contrary to psychological precepts, report Dr. Leon S. Robertson of the Insurance Institue for Highway Safety and Susan P. Baker, Johns Hopkins School of Hygiene and Public Health. They applied Virginia's habitual offender criteria to fatal crashes in Maryland, which has no such law, and found "only 22 ... of 1447 drivers in fatal crashes" could be classified as "habituals." Dr. Robertson told MT that identifying problem drivers before fatal crashes involves identifying problem drinkers in about 50% of the cases. More studies are underway.

A CIVIL WAR PHYSICIAN'S office and waiting room is being created by Cincinnati Academy of Medicine. Dr. Clyde S. Roof is leading its search for medical items of that period.

Rauwolfia Studies Faulted for Methodology

Medical Tribune Report

ROCKVILLE, Md.—Three recent, widely publicized reports linking rauwolfia alkaloids with breast cancer were criticized for faulty methodology by various experts at a Food and Drug Administration meeting here.

The two-day meeting was held at FDA headquarters by the agency's Biometric and Epidemiological Methodology and Cardiovascular and Renal Drug Advisory Committees. The two panels of outside consultants met in what amounted to an emergency session.

The reports, which appeared in the September 21 issue of *Lancet*, were of studies conducted in Boston, in Bristol, England, and in Helsinki.

The first study was carried out by the Boston Collaborative Drug Surveillance Program in 24 Boston-area hospitals during the first 10 months of

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New Breast Biopsy Avoids Disfigurement

By NATHAN HORWITZ
Medical Tribune Staff

MIAMI BEACH, FLA.—A new breast biopsy technique for very small nonpalpable lesions makes the procedure "palatable to any woman and guarantees freedom from disfigurement," the American College of Surgeons was told here.

In describing the method, Dr. Gordon F. Schwartz, of Jefferson Medical College, was sharply critical of those surgeons who call for "generous" biopsies of the breast as a way of ensuring removal of suspicious tissue. All too frequently, he told the A.C.S., such biopsies include removal of an entire quadrant, and "often approach simple mastectomy in their dimensions."

"Our patients are altogether correct

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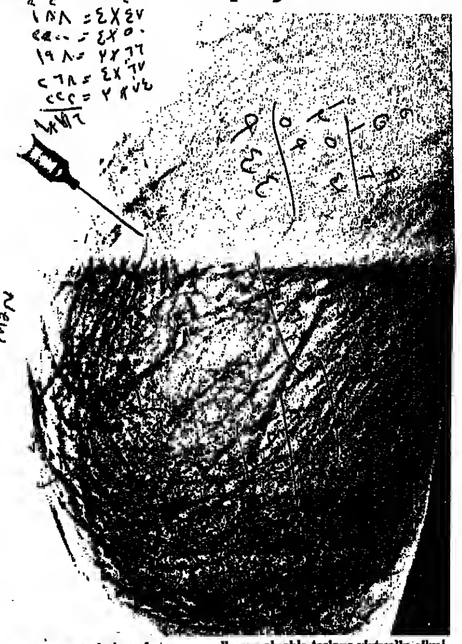

A new breast biopsy technique for very small nonpalpable lesions virtually eliminates the possibility of disfigurement by using repeat mammography and needle placement, above, to mark the precise location of the lesion.

Schools Prodded to Tackle 'Ubiquitous' Worm Diseases

By FRANCES GOODNIGHT
Medical Tribune Staff

NEW YORK—It's time for schools to take discussions of pinworms and other nematodes out of the hush-hush category and set up programs to help reduce the incidence of intestinal parasitic infections among children, the American School Health Association was told here.

At a special seminar on such infections, president-elect Dr. Vivian K. Harlin of Seattle described them as a "ubiquitous" problem that is seldom talked about at school health meetings even though pinworms affect an estimated 10 per cent of the U.S. population—mostly children.

A screening program conducted in one Texas school last spring revealed that 20 per cent of youngsters enrolled in kindergarten through the sixth grade had stools positive for intestinal parasites, according to Dr. Marlette Crowder, acting director of the Tyler-Smith County Health Department, Tyler, Tex.

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PSRO Program Moving on Time As Foes Retreat

Medical Tribune Report

MIAMI BEACH, FLA.—Organized opposition to the Professional Standards Review Organization has come to a virtual standstill, and there's every prospect that a national PSRO program will be functioning on time.

That was the message the nation's PSRO chief brought to the annual meeting of the American College of Surgeons here, as he outlined a picture of "remarkable change" in the profession's attitude towards PSRO.

Dr. Henry E. Simmons, who had accused powerful segments of organized medicine just last spring of mounting a campaign of deliberate misrepresentation against the peer review program, told the surgeons that a striking about-face has "taken place in the last six months since the American Medical Association has modified its program."

"PSRO activity is taking place in all but six states, and by January, 1976, there will be PSRO's in all 203 designated PSRO areas in the United States," he declared.

Dr. Simmons said that "we no longer see the campaign of misrepresentation"

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Early Neonatal Meningitis Is Linked to Low Birth Weight

Medical Tribune World Service

TORONTO—All but 5 per cent of cases of early-onset neonatal meningitis are related to low birth weight or prematurity, Dr. Fred F. Barrett, Associate Professor of Pediatrics at Boylor College of Medicine, said here at an international Symposium on Infections in the Fetus and Newborn, sponsored by the Canadian Pediatric Society.

Streptococcal B infections are a significant new problem for neonates, he said, noting that such infections now cause about 65 per cent of all neonatal meningitis, compared with 33 per cent in 1970.

"It may have been a problem in earlier years but we didn't recognize it," he remarked.

Dr. Barrett, deputy director of the infectious diseases program at the Texas Children's Hospital, Houston, spoke on "Changing Patterns of Bacterial Infections."

Would Focus on Risk Factors

Referring to the association of birth weight and prematurity with meningitis, he said: "We have to focus down on these risk factors. The mothers in this risk group should be watched carefully and a certain number should be treated expectantly. I wouldn't call this prophylaxis, I'd call it early treatment."

Early-onset meningitis, symptoms appearing after five days, results in a mortality of 60-75 per cent, whereas late-onset disease, symptoms after 10 days, results in 14-18 per cent, Dr. Barrett said.

In contrast to the high correlation between the early-onset disease and obstetrical complications, only 19 per cent of the late-onset cases showed such difficulties, he noted.

Of patients with early onset, 86 per cent had positive signs of streptococcal infection, while 14 per cent were heavily colonized early in life, he said.

"The organisms isolated from multiple sites suggested that the early-onset disease was acquired in utero or from the mother at time of delivery," Dr. Barrett said. "The mortality is high because probably many are infected in utero. These infants are sicker for a longer time than their age indicates. We must recognize the risk patients earlier than we do now and treat them earlier, and recognize the risk mothers and treat them earlier."

Of 200 mothers randomly selected at term, he reported, 25 per cent were colonized at one or more sites, and 25 per cent of the offspring were colonized. Obstetrical difficulties are not related to the risk of colonization.

Symptoms of early-onset disease are unexplained episodes of apnea and high frequency of seizures, whereas in

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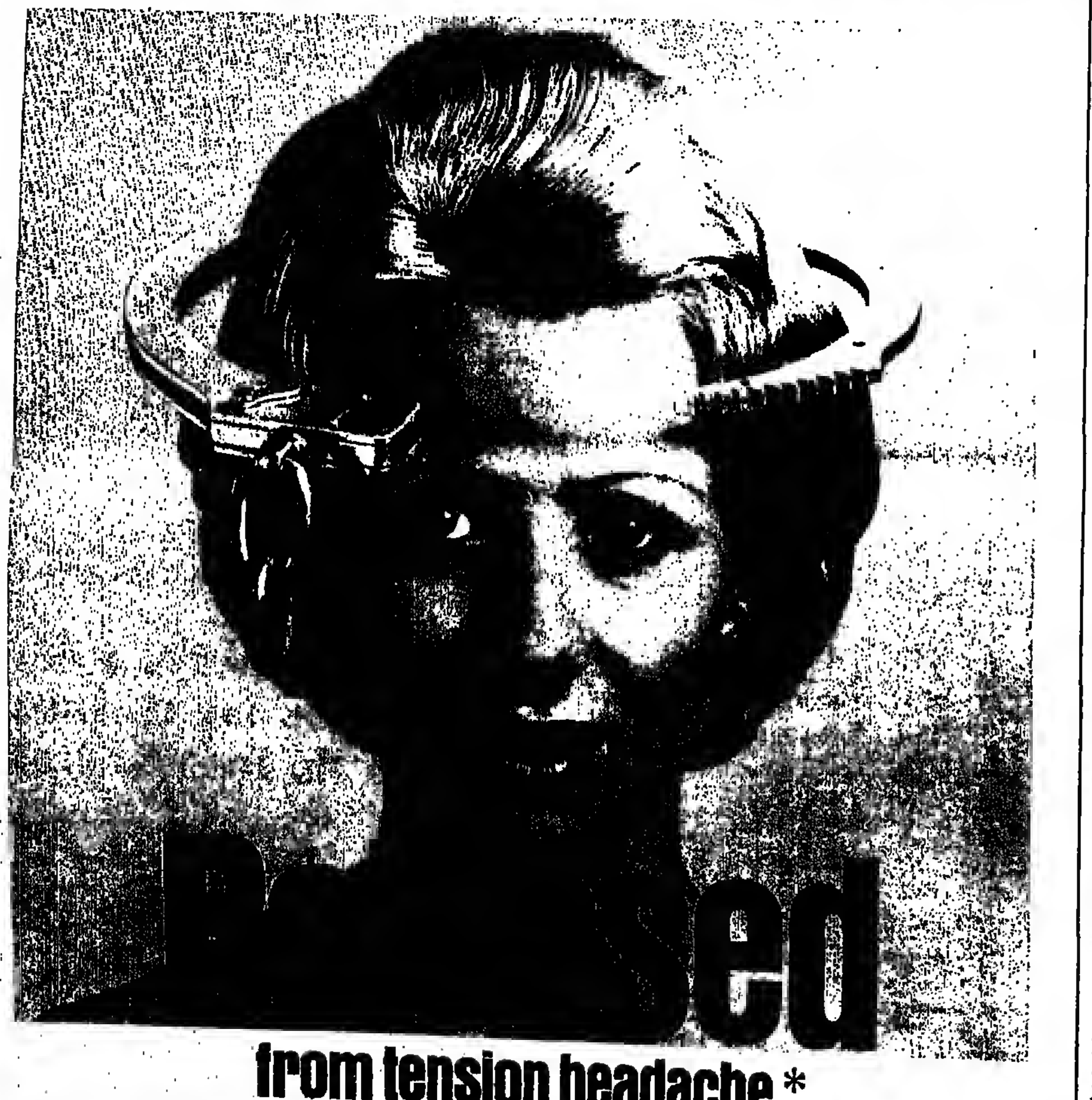

PSRO Program Moving on Time As Foes Retreat

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that, he declared, had been occurring last year. "Already there are 115 PSRO's under development, 10 are actually reviewing cases, and by the next funding cycle, we expect to see another 40 or 50 PSRO's, or about 150 by next year."

He told a news conference that some state-wide medical groups that had been most outspoken against the PSRO proposals have become more muted, since the A.M.A.'s House of Delegates last June called for detente with PSRO.

"When I go back to private practice, I hope to see a PSRO in my area," he stated. "It's the best protection I have."

A leading surgeon told the newsmen that further debate on the law is "an exercise in futility." Dr. George R. Dunlop of Worcester, Mass., vice-chairman of the A.C.S. Board of Regents, declared: "The PSRO law is a fact of life, it's the law of the land. Let's not waste energies debating its merits or how it came about."

He said there has been less opposition to PSRO among surgeons than among some other specialties, because "surgeons are traditionally accustomed to working in an environment where they are scrutinized by their colleagues; they are accustomed to peer review and to retrospective analysis."

He added: "By and large those segments of the profession who are accustomed to working in this environment feel a little more secure with PSRO. That segment of the profession not accustomed to working in this environment feels less secure, more hostile. When they find what is entailed, they'll feel less threatened." —N.H.

Shriver Bids AMA Yield Spokesman Role to APHA

Medical Tribune Report

NEW ORLEANS—The American Medical Association should relinquish its role as the spokesman for the nation's physicians, according to Sargent Shriver, the original director of the Office of Economic Opportunity.

"I would like to suggest that the American Public Health Association become the voice of American medicine instead of the A.M.A.," he told the A.P.H.A.'s annual meeting.

'Structured' Counselor Role With Married Patients Urged

Medical Tribune Report

LOS ANGELES—The family physician should play a "well structured role" of marriage counselor for his patients—even to the point of recommending divorce at times, Dr. Beverley T. Mead told the 26th Annual Scientific Assembly of the American Academy of Physicians in Los Angeles.

"You should step in with specific advice when it is needed rather than wasting time with the slow-paced indirect approach favored by some psychiatrists," said Dr. Mead, Professor and head of the Department of Psychiatry at Creighton University School of Medicine in Omaha. The more structured approach taken by the family physician, he said should involve prevention of marital troubles before they occur as well as counseling those patients who already have difficulties.

"In some cases when you find that divorce is the best answer to well-established problems you should tell your patients so," he suggested. "It may be true that a child suffers in a broken home, but he or she may suffer more in a home that should be broken."

However, if one partner wants a divorce and the other does not, it is often possible to restore the union by convincing the negative one to stick it out a little longer. "If they struggled along for six years, with a better understanding of their problems, they should do themselves the favor of seeing whether or not they can struggle successfully through another three weeks," Dr. Mead said.

The Nebraska psychiatrist also told the A.A.F.P. that family physicians should play a role in discouraging marriages when the couple is obviously poorly prepared or mismatched. He recommended especially against teen-age marriages.

DR. BEVERLEY T. MEAD

"Marriage is for grownups. If I could do it, I'd support legislation against marriage before the age of 21."

In their pre-marriage counseling, family physicians should probe their patients' attitudes on many fronts, in-

Continued on page 13

Small Vitamin C Doses 'Just as Good' in Colds

Medical Tribune Staff

NEW YORK—The newest findings in large-scale Canadian trials of vitamin C suggest that ascorbic acid prevents or reduces the symptoms of colds in far smaller doses than have been recommended.

Dr. Terence W. Anderson, Professor of Epidemiology and Biometrics at the University of Toronto, reported that a double-blind study of 600 healthy volunteers—the latest in three trials with a cumulative total of nearly 5,000 subjects—has shown that "relatively modest" intake of vitamin C "may be sufficient to produce a useful reduction in over-all morbidity [of colds]".

"Tissue saturation is apparently achieved with 100 mg. of ascorbic acid daily, and there appears to be no benefit in dosages above that," he declared, noting that results of the last trial were approximately the same as those of the two earlier ones, with 30 per cent fewer days of absence from work or spent indoors among the vitamin group as compared with placebo subjects.

Dr. Anderson spoke at an international conference on vitamin C jointly sponsored by the New York Academy of Sciences and the Institute of Human Nutrition at Columbia University.

In the latest study, he said, the volunteers received a prophylactic ascorbic acid dose of 500 mg. weekly in sustained-release form during the three-month trial. The dosage was increased to 500 mg. daily on the first day of illness, and continued if needed at 12-hour intervals for the next four days. These schedules were in marked contrast to prophylactic and therapeutic doses ranging as high as 4 Gm. daily in the two earlier trials, Dr. Anderson reported.

All three trials, he continued, now have shown "a small vitamin effect on the number of [cold] episodes per subject, but a more substantial effect on the days indoors or off work. Similarly, all have shown consistently little or no effect on days of nasal symptoms (thus casting some doubt on the antihistamine theory of vitamin C action), while there have been some large but inconsistent effects on days of chest symptoms, fever, and malaise."

The benefits occurring regardless of the dose employed, he added, suggest that the dosages used in the team's first trial were "probably unnecessarily high."

In commenting on the group's over-all experience, Dr. Anderson observed that a "host of secondary questions" presented themselves as evidence began to accumulate in the first two trials suggesting that Vitamin C does exert "some sort of effect." Of these questions, the most important was, "If large doses are necessary does the risk of side effects outweigh the possible benefits? It was largely in order to resolve this and related problems that the third trial was undertaken.

No Toxicity Observed

Dr. Anderson stressed that he and his team have seen no symptomatic evidence of toxicity resulting from doses of 2,000 mg. daily over three or four months in healthy persons, but "this does not mean that this dose level is necessarily safe for longer periods, particularly in individuals with pre-existing disease, or that the occasional individual might not show some unusual and undesirable reaction."

He also warned: "While perhaps not a side effect in the ordinary sense of the word, the depression in blood ascorbic levels that occurs on sudden withdrawal of a chronic high intake should be recognized as a potentially harmful reaction. For example, an individual admitted to a hospital with an acute medical or surgical condition might be at a physiological disadvantage if this period of unusual stress coincided with an acute hypoascorbemia due to sudden withdrawal of a regular high intake."

He concluded that "unless and until firm evidence is forthcoming that higher doses of vitamin C are more effective, we should adhere to the principle of *primum non nocere* and advise the public to limit their daily intake to 100 or 200 mg. except possibly for brief periods during acute infection when gram doses *may* be beneficial."

At a press conference, Dr. Anderson emphasized that "it is quite possible" that the beneficial effects observed during the trials were not more than symptomatic. "We were only recording symptoms as reported by the subjects," he said. "We didn't have the facilities for serologic or virologic studies."

Two leading investigators at the press conference joined in calling for moderation in the use of ascorbic acid. Dr. Myron Winick, director of Columbia's Institute of Human Nutrition, declared: "When people talk about giving vitamin C in doses of 10 Gm. a day, they're talking about quantities in the category of therapeutic agents. I would not want to see vitamin C on the market as a therapeutic agent until its safety in that range is appropriately demonstrated."

Alfred E. Harper, Ph.D., of the University of Wisconsin, also cautioned against using vitamin C "as a drug to treat conditions that are not caused by the absence of the compound as a result of nutritional deficiences."

Dr. Harper, who is former chairman of the Committee on Dietary Allowances of the National Nutrition Council/National Academy of Sciences, said, "We have to separate the nutritional and therapeutic uses of nutrients and see how they compare with other drugs used to treat the same disorders."

ECTOPIC BEAT

"It isn't absolutely necessary for executives to have heart disease, ulcers and stroke, ailments commonly associated with American businessmen who reach the management level."

—News release from the A.M.A.

But it's still kind of *de rigueur* isn't it?

[Regular beat: Immateria Medica, page 23.]

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CLINICAL NEWS NOTE: *"Using this technique, we have noted our patients are less anxious when biopsy is recommended, because they are sure of a minimal operation, with a short hospital stay. No patient, subsequently discovered to have benign [breast] disease, has been sorry she underwent the operation, since no disfigurement has resulted. Patient acceptance has been universally excellent." (Dr. Gordon F. Schwartz, see pg. 1.)*

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Medical Tribune

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Enzymes Help Differentiate Infarction, Gauge Infarct Size

Medical Tribune World Service

BUENOS AIRES—The detection in serum of one enzyme (glycogen phosphorylase *b*) can help differentiate myocardial infarction from noncardiac myopathies. Serial determinations of another enzyme (creatine phosphokinase) are a "valuable method for intravital estimation of infarct size."

Separate research teams presented these two conclusions to the Seventh World Congress of Cardiology here.

Glycogen phosphorylase *b* is absent or undetectable in the serum until about two hours after the onset of myocardial infarction, and the level peaks about 24 hours after infarction, reported Drs. A. Wollenbergen, M. Böhm, E. G. Krause, and H. Will, of the Central Institute of Heart and Circulatory Regulation Research, Academy of Sciences of the East German Democratic Republic, Berlin-Buch.

The only disorders other than myocardial infarction that have previously been shown to produce detectable serum levels of phosphorylase *b* are encephalomalacia and noncardiac myopathies, including dermatomyositis and dystrophy, according to these investigators.

Differentiating Infarction

"The heart-specific striated muscle phosphorylase *b* isoenzyme can be separated from other muscle isophosphorylases by acrylamide gel electrophoresis," Dr. Wollenbergen explained, "thus permitting the differentiation of myocardial infarction from noncardiac myopathies."

Serum levels of phosphorylase *b* in seven patients who died between the first and fourth day after myocardial infarction were compared with those of 51 patients who survived infarction. Blood samples were taken between 20 and 30 hours after infarction.

"Patients who did not survive had much higher serum phosphorylase *b* levels than those who survived," Dr. Wollenbergen said. "Thus, the determination of serum phosphorylase *b* may have prognostic value in myocardial infarction."

Serial Determinations of CPK Indicate Size of Infarct

► Infarct size was calculated in 32 patients with acute myocardial infarction by serial determinations of CPK, reported Drs. W. Bleifeld, D. Mathey, and P. Hanrath, of the Department of Internal Medicine, Rheinisch-Westfälische Technische Hochschule, Aachen, West Germany.

They determined CPK concentration every two hours after the infarction for the first 20 hours, and then every four hours, and these data were related to hemodynamic data. In 10 human hearts, infarct size was measured post mortem and correlated to infarct size as calculated from serial determinations of CPK.

There was an "excellent correlation" between calculated infarct size and infarct size as determined at autopsy, Dr. Bleifeld said. Infarct size correlated well with the deterioration of hemodynamics, and he blamed "differences in this relation" on previous lesions of the left ventricle.

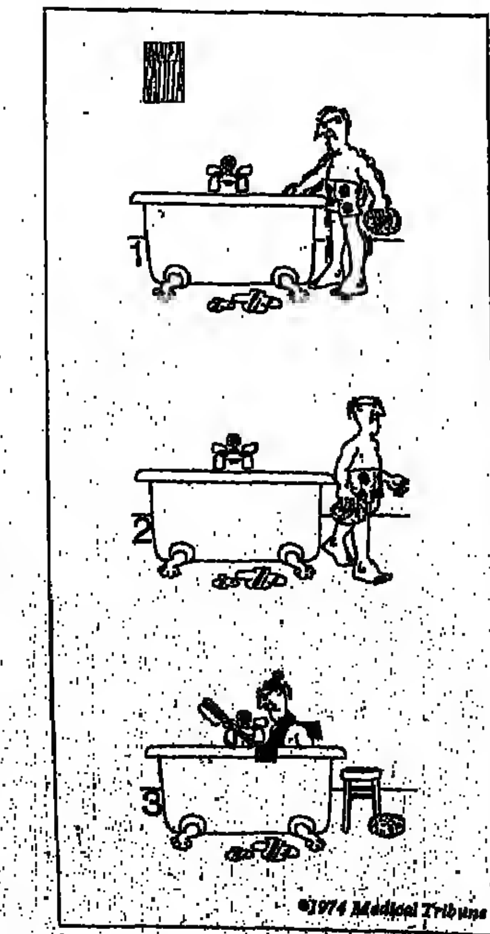
In 25 patients who were suffering from their first myocardial infarction, mean left-ventricular necrosis was 66 Gm., pulmonary end-diastolic pressure increased to 20 mm. Hg, and cardiac index decreased to 2.9 L./minute/M.²

The remaining seven patients who had previous myocardial infarctions had a "relatively small" infarct size (mean 38 Gm.), but a "markedly increased" pulmonary end-diastolic pressure of 23 mm. Hg, and a reduced cardiac index of 2.5 L./minute/M².

Aid to Prognosis and Therapy

"In conjunction with hemodynamic data," Dr. Bleifeld said, "evaluation of infarct size reveals a better understanding of the functional state of the heart, the prognosis and therapeutic interventions."

The mass and the functional state of the residual myocardium, rather than the size of the acute infarct itself, determines pump function, he said.



Current Opinion

Heavy Drinking, Smoking, and Cancer

By MARK KELLER
Research Specialist in Documentation
Center of Alcoholic Studies, Rutgers University;
Visiting Scientist
National Institute on Alcohol Abuse and Alcoholism

IN THE ARTICLE by Nathan Horwitz (MT, Aug. 14) three experts are cited as asking for clarification of the statement by Dr. Morris E. Chafetz, Director of the National Institute on Alcohol Abuse and Alcoholism, that "the combination of heavy drinking and smoking increased by 15-fold the risk of mouth and throat cancer."

The statement is based on the review of the subject in Chapter V, Part 1, of the *Second Special Report to the U.S. Congress on Alcohol and Health*, prepared by a Task Force under Dr. Chafetz's chairmanship and published under my editorship. The particular statement is referenced to the study by Drs. Kenneth Rothman and Andrew Keller, in the *J. Chronic Dis.*, *25: 711-716*, 1972.

Their Table 2 (p. 713) shows that, with the risk of oral cancer for people who neither smoke nor drink set at 1, the risk for those who are both heaviest drinkers and heaviest smokers is 15.50. That finding was based on a sophisticated regression analysis of 483 cancer patients and a matched control group of 447 people, all patients in three VA hospitals in New York City, from whom adequate drinking and smoking histories were obtained. In addition, the *Report* cites several other studies which show a decided increase of relative risk of oral cancer from combined heavy smoking and heavy drinking.

Horwitz's article quotes the three authorities also to the effect that they have had great difficulty in gathering enough cases of heavy-drinking nonsmokers to establish the relative risk of heavy alcohol consumption alone. This problem is recognized and emphasized in the *Report*. But it was overcome at least in the recent study by Drs. Rothman and Keller who, in their Table 2, show also that with the risk of oral cancer set at 1 for nondrinking nonsmokers, the risk for heavy smokers who do not drink is 2.43, and the risk for heavy drinkers who do not smoke is practically identical, 2.33. These statistics formed the basis for Dr. Chafetz's statement of an increased risk from heavy alcohol consumption alone.

Many experts were unconvinced by the Surgeon General's original announcement of increased risk from cigarette smoking, which aroused worldwide debate. Nevertheless it was the duty of the Surgeon General to make the information he had available to the American public and to the physicians who advise them about their health. It was likewise the duty of the Director of the National Institute on Alcohol Abuse and Alcoholism to share the information available to him. This has been done in great detail with full documentation in the *Second Report to Congress on Alcohol and Health*, freely available from NIAAA (5600 Fishers Lane, Rockville, Md. 20852).

The three authorities interviewed by Horwitz rightly urged the need for more research. The *Report* not only discusses the cautions appropriate for interpreting the existing data but likewise emphasizes the need for more research. The National Institute is indeed fostering such additional research, among others by the World Health Organization's International Agency for Research on Cancer, and in due course will make the results known to the health professions and the American public.

The one disturbing feature in Horwitz's article is the quotation of Dr. Ernest P. Wynder to the effect that "Heavy drinking by itself does not increase the risk of cancer . . . in the absence of smoking." It is not understandable how Dr. Wynder can be so positive. If his samples contained too few nonsmoking heavy drinkers to conclude there is an increased risk, then obviously there were too few to conclude there is no increased risk, and the most he could say is that his evidence is inconclusive.

Ten papers by Dr. Wynder and his associates are cited in the *Report*, dated between 1956 and 1972. In one (*Cancer*, 10: 1300-1323, 1957) they say (p. 1306), "In our data two factors, alcohol and tobacco, seem to increase the risk of oral cancer when each is considered separately," but in none of them is there any evidence that "Heavy drinking by itself does not increase the risk of cancer." I would hate to be the author of such a guarantee, even if it did not go against the demonstration of the opposite by Rothman and Keller. Since the statement can be harmfully misleading, I am sure MEDICAL TRIBUNE will want to set the record straight.

The *Report*, and Dr. Chafetz's statement, did not implicate moderate drinking, nor was it suggested that alcohol can cause cancer. The explicit emphasis was the increased risk from heavy drinking, and the added or synergistic risk from combined heavy drinking and smoking. We all need to think about the first risk as well as the second, even while waiting the years it may take for the desirable additional research to be completed.

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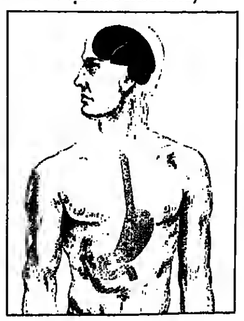

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Embolization Curbs Upper Gastric Bleeding

Medical Tribune Report

SAN FRANCISCO—Selective embolization of the left gastric artery controlled upper gastric bleeding in eight of 11 patients, demonstrating that the technique is a feasible alternative to arterial vasopressin infusion, according to a Michigan study.

Dr. Vincent P. Chuang of Ann Arbor reported at the American Roentgen Ray Society meeting here that embolization appears to offer two advantages.

The technique, in which the left gastric artery is embolized with amino-caproic-acid-mixed autogenous blood clot, autogenous fat globules, sterile oxidized cellulose, or absorbable gelatin sponge, is simple and results are immediate, he said.

And he emphasized that since the patient is not given large doses of vasoconstricting drugs, no monitoring is required for side effects.

Dr. Chuang said that while further experience is needed, preliminary results are promising. Ten of the 11 patients treated with the technique at the Wayne County General Hospital were terminal bleeders in whom heart, lung, renal, or liver complications precluded surgery, he related.

Success Rate 70%

The success rate in this group was 70 per cent and would probably have been higher if the patients had not been terminal bleeders, he said.

Seven of the patients in whom the technique was successful are alive and well two to 14 months after the procedure, with no recurrence of bleeding, Dr. Chuang reported. The eighth patient died of pneumonia unrelated to the gastric bleeding 11 months after embolization and with no evidence of further bleeding, he added.

Of the three failures, two patients had diffuse hemorrhagic gastric bleeding and died of complications and one had a large gastric ulcer, he said.

The gastric mucosa was observed in six of the patients one to five days after embolization, he continued. Five showed no evidence of mucosal necrosis and one showed scattered areas of mucosal slough.

Dr. Chuang noted that vasopressin infusion is indicated in patients with gastritis.

Learn Self-Examination

Many hospitals, like New York City's Lenox Hill (above), have started classes to teach women how to examine themselves for signs of breast cancer because of the increased demand for information following the recent operations on Betty Ford and Happy Rockefeller.

Radon Seeds Put Eye Melanoma Under Control

Medical Tribune Report

SAN FRANCISCO—Local irradiation with radon seeds can provide local control of malignant melanoma of the eye in a majority of patients, an Ohio State study has indicated.

Dr. Gunther Ehlers reported to the American Roentgen Ray Society that the technique, in which a ring applicator 2 mm. larger than the tumor and filled with radon seeds for a dose of 6,000-9,000 roentgens is implanted in the affected eye, has provided local control in 61 per cent of the patients evaluated.

In these patients, enucleation was avoided, vision saved, and metastases apparently prevented, he said.

He reported on 18 patients. In seven the technique was not successful and enucleation was performed in six.

Enucleation Often Fails

Dr. Ehlers noted that enucleation frequently fails to cure primary malignant ocular melanoma and approximately half the patients succumb to metastatic disease.

He suggested that the more conservative approach with local irradiation might be used for selected patients. The failures of this technique appeared to be related more to the size of the tumor than the dose, he remarked, adding that the technique was most effective with tumors between 5 and 10 mm. in diameter.

The implanted ring is left in place indefinitely. Complications have been seen in half the patients, but have seldom been severe and have resolved spontaneously. Patients are being followed carefully to be sure no long-term complications develop, Dr. Ehlers added.

One Man...and Medicine

ARTHUR M. SACKLER, M.D.,
International Publisher, Medical Tribune

Thirty-Dollar Steaks?

I DON'T BELIEVE the full implication of inflation has yet hit home to the American people. Most of our patients see it as a reduction in salary, as an inconvenience, albeit outrageous. I wonder if our people completely understand its potential impact on our national health. Of course, medicine in this country has played a great role in reducing infant mortality (not yet enough), in increasing longevity (not yet enough), and in raising the standards of health (not yet enough). But has not the real substrate for most of our health advances been improvements in nutrition, in housing, in working conditions, as well as in a few basic public health measures?

During the summer we laboriously tracked down the most recent official Bureau of Labor price statistics giving national average prices on some important foods during July, 1974—and July, 1973. They are based on a sample of 39 metropolitan areas and 17 smaller cities. I publish them in the box below—so that you can go shopping and make your own comparisons. For since then prices have soared, making these figures completely out-of-date.

Latest Figures

According to the Labor Department's Consumer Price Index, by October prices had made their biggest jump since 1947. The increase in all consumer prices was 12.1 for the year—and for food alone was 11.3 per cent. In September the biggest increases were meat, fish and poultry—up 3.2 per cent that month.

I am told that steak is going for $5 a pound in some neighborhoods. Who ever heard of fish selling at nearly two bucks a pound? I do remember last year in Japan that I was told housewives were paying as much as $16 for a pound of steak and for top-quality strip sirloin over $30. Of course, I thought, "It can never happen here." But, it seems, we are well on our way. Needless to say, one can eat flounder and save a dollar or a dollar and a half per pound over sole. And chicken can save even more.

The positive side of this coin is that the affluent will eat less steak, more fish and chicken, and be the better for it. Of course, the very affluent won't, and so they will miss the benefit of less cardiovascular disease and that wonderful feeling of fitness which one euphorically enjoys after having taken off 10 or 15 pounds.

It is not for these that the pinch really hurts. It may be that for as much as one-third of our population inflation in food prices can mean the difference between a marginally adequate diet and undernutrition between an inadequate diet and gross malnutrition.

National *averages*, in food prices in 39 metropolitan and 17 smaller cities, according to the Bureau of Labor Statistics:	*July, 1974*	*July, 1973*
Lettuce	49¢ head	51¢
Carrots	25¢ lb.	23¢
Oranges	12 for 1.12	1.02
Tomatoes	59¢ lb.	57¢
Potatoes	20¢ lb.	18¢
Apples	41¢ lb.	37¢
Milk	39¢ qt.	37¢
American Cheese, processed	1.45 lb.	1.18
Eggs	62¢ doz.	74¢
Porterhouse steak	2.06 lb.	2.08
Haddock, fillet, frozen	1.50 lb.	1.34
Ocean Perch, fillet, frozen	1.08 lb.	1.08
Shrimp, breaded, frozen	2.38 lb.	2.19
Chicken, frying	52¢ lb.	60¢
Bread	33¢ lb.	27¢
Flour	21¢ lb.	14¢
Butter	90¢ lb.	85¢
Fortified margarine	55¢ lb.	35¢

Overcoming the Damage

I can understand why the indignation of our people focuses on the economics instead of the health aspects of spiraling food costs. It is more immediately visible. Have a pill damage a score of people, and a hysterical flurry of action ensues—hearings and headlines, legislation and regulation. Have scores of thousands of pregnant women malnourished and their children severely damaged in utero by lack of food—and there ensues a resounding silence.

This makes no sense. Remember the wartime days when our Government stressed the seven basic foods?

1. Leafy green and yellow vegetables.
2. Citrus fruits, tomatoes, raw cabbage.
3. Potatoes, other vegetables and fruit.
4. Milk, cheese, ice cream.
5. Meat, poultry, fish, eggs, dried peas and beans.
6. Bread, flour, cereals.
7. Butter and fortified margarine.

And what if one were to try to follow this advice today:

Eat green vegetables every day. How many middle- and low-income large-sized families can eat green salads every day at present costs?

Be sure to drink orange juice every day. This absolutely essential source of ascorbic acid has gone from 25¢ for 10 oranges in 1940 to 93¢ for 10 oranges in 1974. However, if 10 oranges provide a quart of orange juice and 6 ounces of orange juice provides approximately 90 mg. of ascorbic acid, one could get almost 500 mg. of vitamin C by consuming the whole quart—which currently costs 79¢. This compares with a 500-mg. tablet of ascorbic acid costing anywhere from 1¢ to 4¢ per tablet.

Be sure to have bread and milk every day. I can hardly believe that the white "sponge" on the grocery shelves is now over 50¢ a loaf, and milk 43¢ a quart.

Have some meat each day. Are you kidding?

It is high time for the American physician and organized medicine and all our patients to make crystal clear to our Government that inflation is not just a pocketbook issue but for many a matter of health or illness and, for some, ultimately life and death.

It is a farce to hold hearings on the cost of health care, on the treatment of disease, rather than on the health threat of food inflation. It is like locking the barn door after the horse has been stolen. The most important type of medicine is preventive, and one of the most important preventive medicines of all is an adequate, well-balanced diet.

EPIGRAMS—Clinical and Otherwise

We all labor against our own cure, for death is the cure of all diseases.
Sir Thomas Browne (1605-82)
Religio Medici

Washington Stamps

Philbert Commerson

Philbert Commerson (1727-73) received his medical education at Montpellier. After graduating with an M.D. he devoted his full time to natural sciences. He sailed with Louis Bougainville on an expedition around the world, making drawings and collecting specimens. Settling in Mauritius, he classified the flora and fauna. Stamp issued in 1974.

Text: Dr. Joseph Klar
Stamp: Minkus Publications, Inc., New York

Early Neonatal Meningitis Linked to Low Birth Weight

Continued from page 2

late-onset, lethargy and fever appear and there are fewer episodes of apnea and symptoms characteristic of meningitis in older patients.

Asked when to start antibiotics and how long to continue, Dr. Barrett said that the answers depend largely on subsequent developments and on the time it takes for the physician to get reliable information from the laboratory.

"We can rely on a negative culture report after five days, so we continue the antibiotic for five days and if the signs are negative we discontinue, but we have no hard and fast rule on that," he explained.

Antimicrobial Therapy

► Dr. Jerome O. Klein, Associate Professor of Pediatrics at Harvard University, described gentamicin and kanamycin, along with a penicillin, are the drugs of choice in treating early-onset neonatal meningitis.

Chloramphenicol is useful against gentamicin-resistant strains, he said. Polymyxin B should not be used for neonatal infections as it does not cross biological membranes into body fluids, he said, the only exception being when it can come in direct contact with the organisms.

In late-onset meningitis, Dr. Klein said, penicillin is the drug of choice for streptococcal infections and gentamicin against any staphylococcal organisms.

Before antimicrobial therapy begins, cultures must be taken of the blood, spinal fluid, and urinary tract, he stated.

Communication with the obstetrician is critical in neonatal infections, Dr. Klein went on.

"When there is rupture of the maternal membranes, any infant exposed in the birth canal for more than 24 hours is an infant at risk," he said.

Signs of these infections are often subtle, he observed, but among specific signs to watch for are jaundice, poor feeding, and lethargy. The white count is not helpful in diagnosis, he noted. Any infant with unexplained fever must be considered at risk.

The umbilical cord should be carefully checked for any inflammation, joints manipulated to see if there is an early onslaught of arthritis, and a check made for urinary tract infection or peritonitis, Dr. Klein said.

Recently, he said, infants with otitis have been encountered, and this is a new cause of concern.

"It is not easy to examine tympanic membranes, but it can be done with training, and this is also a good region for aspiration," he commented.

There are considerable limitations in looking at the level of immunoglobulin as a sign of neonatal sepsis, he observed, as increased levels of IgM are present in noninfected infants, and some infected infants have not had elevated levels. A more promising line of investigation, he added, is that specific antigens will be found as an indication of infection.

The Only Independent Weekly Medical Newspaper in the U.S.

Medical Tribune

and Medical News

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Paranormal Studies

PUBLICATION of a paper on parapsychology in *Nature* does seem to confer upon it the imprimatur of this august journal of science. And that was the reaction to it in the daily press and in TV news broadcasts. In a leading article in the same issue, *Nature* itself says that the appearance in the journal "is not a process of receiving a seal of approval from the establishment; rather it is the serving of notice on the community that there is something worthy of their attention and scrutiny."

In spite of reservations about the paper expressed in the leading article, what is worthy of attention and scrutiny is evidence from a series of experiments "suggesting the existence of one or more perceptual modalities through which individuals obtain information about their environment, although this information is not presented to any known sense." The article is entitled "Information transmission under conditions of sensory shielding"; its authors, R. Targ and H. Puthoff, are two physicists at the Electronics and Bioengineering Laboratory of the Stanford Research Institute. It is noteworthy that *Nature* published the article in the section of the Physical Sciences, not the Biological Sciences.

In any event, Targ and Puthoff seem to have confirmed that Uri Geller, under controlled conditions that eliminated chicanery, has a remarkable ability to "reproduce target pictures drawn by experimenters located at remote locations" and that Pat Price has an equally remarkable ability to "describe randomly chosen geographical sites located several miles from the subject's position and demarcated by some appropriate means (remote viewing)."

In these days of excitement about acupuncture, why not parapsychological powers as well?

An anecdote by the late Dr. Claude S. Beck about his intern days at the Johns Hopkins University seems appropriate. Dr. Beck wrote: "Doctor Finney had Professor Halsted see a patient at the Union Protestant Infirmary. Surgical operation was done. Doctor Halsted's diagnosis was wrong. Doctor Finney's diagnosis was correct. The following comment was made. 'Finney, on what did you base your diagnosis?' Answer, 'Just a hunch, Professor.' Whereupon Halsted said, 'I would rather be wrong with reason than right without reason.' How could an intern interpret this? Was it the sublime in logic or was it the arrogance of being Professor?"

Many of us would rather be right with a hunch—no matter how paranormal it might be.

The Advantage of Being Female

THAT mortality statistics heavily favor the female over the male has been well publicized. As an editorial on this page put it four years ago, "Whatever inequalities exist socially and politically, biologically the deck is stacked against the male." The actual statistics are not, however, well known. The *Statistical Bulletin* of the Metropolitan Life in its August issue has compiled decennial figures from 1900-1970 for the sex ratio of female to male mortality by age group, based on data from the National Center for Health Statistics. For the year 1970, the leading causes of death are also listed.

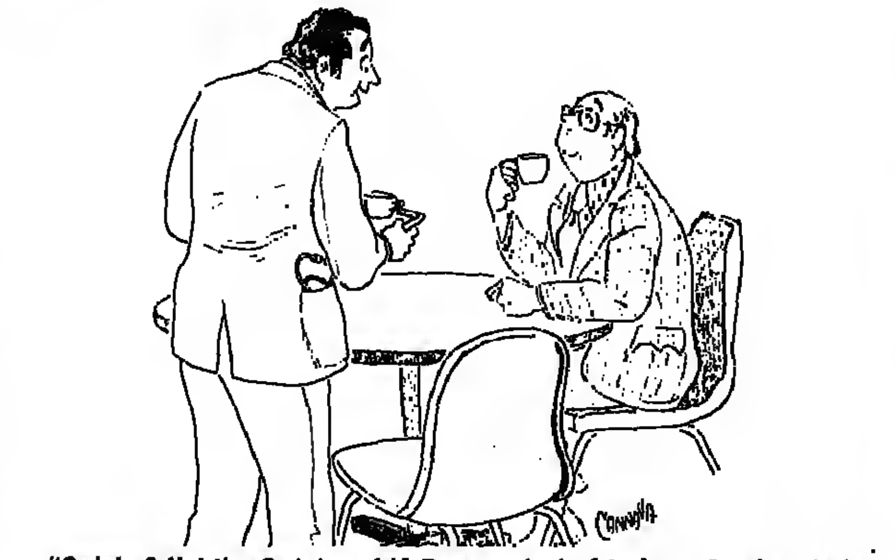
Death rates for all ages among women from 1900 until 1920 were about 10 per cent lower than those among men. But although the rates have been declining for both sexes thereafter, the advantage to women has been steadily increasing. In 1930 the over-all female mortality was 84 per cent that of the male; in 1940, 77 per cent; in 1950, 69 per cent; in 1960, 62 per cent and by 1970 it had fallen to 57 per cent. As the *Bulletin* states, "At ages under 5 and at ages 85 and over the sex differential has changed little since 1900, but in all other age groups the female advantage has continued to grow. In 1970 female mortality was 36 per cent of that for males at ages 15-24 and ranged between 47 and 57 per cent of that for males at ages 25 to 74."

This advantage cannot be attributed to "the considerably higher death rates from accidental injuries and violence to which men are subject." Even when these deaths are excluded, women's mortality is more favorable. A variety of explanations have been proffered for the lower death rates among women but the most likely one appears to be the presence of a biological factor, whatever that might turn out to be.

Intestinal Parasites in Children

CLINICAL QUOTE: "*Infection with intestinal parasites . . . can be with a variety of organisms. It can cause a variety of medical, public health and perhaps even social problems. Some of the medical problems may be considered serious, some merely troublesome. By serious, we mean such clinical manifestations as anemia, pneumonia, perforated bowel, appendicitis, bloody or mucous diarrhea, and growth failure.*

"*Anyone who has been associated with school health programs . . . has most likely had the experience of the angry telephone call . . . from the frustrated mother who reports that her child "has picked up pinworms at school.*" (Dr. Vivian K. Harlin; see page 1.)



"Swigler? Not the Swigler of 'A Reappraisal of Imipramine Levels in Primary Depressive Syndromes?'"

LETTERS TO TRIBUNE

Blood Lead Studies

The article (MT, Sept. 25) comparing two apparently conflicting studies dealing with blood lead levels in El Paso, Texas, touches on an important area, and needs to be clarified. Dr. McNeil reported the details of a study involving children living near a lead smelter and their matched controls at the Symposium on Recent Advances in the Assessment of the Health Effects of Environmental Pollution in Paris. Dr. Carnow's observations were based on anecdotal information that he collected and did not constitute data that could be compared to the McNeil study.

Dr. McNeil's study included 138 of the total of 206 children that lived in the Smeltertown area. They were carefully matched with controls, and when the two groups were compared, there were very few and insignificant instances of deleterious effects noted in either group. Of the children living in Smeltertown that did not participate in the McNeil study, 51 per cent had blood lead levels exceeding 40 mcg per 100 ml., whereas 73 per cent of those in the study exceeded that level. Therefore, it seems highly unlikely that those children not included in his study would have symptoms attributable to lead effects as Dr. Carnow suggests. The question of subtle neurophysiologic effects occurring secondary to asymptomatic elevations of blood lead can only be answered by collecting data from carefully controlled studies.

EDWARD B. MCCABE, M.D.
Madison, Wis.

100% Agreement

Now Dr. Sackler's done it. . . written an editorial with which I can agree 100 per cent—"TEARS ALONE ARE NOT ENOUGH".

T. NORLEY, M.D.
W. Palm Beach, Fla.

The Nude Centerfold MD

I am a steady reader of yours . . . After reading your current (Oct. 9 issue) today, I have elected you to kick off my new campaign: that all publication which use the abbreviation Dr. shall stipulate whether he (or she, of course) be MD or some other.

Is "Dr." Keith, of the *Playgirl* centerfold, an MD or a non-uptight California psychologist? I believe that medical publications should lead the way in making sure the credentials of the "Dr"s about whom they are writing are clear.

MEDICAL DOCTOR

(Dr. Paul E. Keith is a physician. MEDICAL TRIBUNE *uses "Dr." before the full name to refer to a physician. A Ph.D. is so designated in the first reference. Thereafter he is also "Dr." —Ed.)*

'Hard Evidence' Boys

I very much appreciated your editorial, "Apologies Are in Order from the Double Blind Boys to the Practicing Physician" (MT, Sept. 25). I think it is time too that somebody examined the "hard evidence boys." Lately I have wondered about the "hard evidence" on the basis of which patients with diverticulosis were put on a low roughage diet; the hard evidence on the basis of which patients with coronaries were kept in bed for 6 weeks; the hard evidence on the basis of which obese, maturity-onset diabetics were treated with insulin-stimulating drugs; the hard evidence on the basis of which people with TB were put to bed for a year; and so on.

History will in all probability show that "double blind" really demonstrates that the investigator's hindsight was as bad as his foresight.

SAMUEL J. ARNOLD, M.D.
Morristown, N.J.

Political Diagnosis?

Thank you for your refreshing article on "Complications of Phlebitis" which is a critique of Dr. Walter Tkach's, also General Tkach's, diagnosis of former President Nixon's phlebitis. I think you made it clear, though you didn't state so openly, that this was a political, not a medical diagnosis and was for the purpose of furthering Mr. Nixon's previous stance against revealing all that festered in his administration.

I have seen no medical criticism of Dr. Tkach's statements and your analysis is one indicator of why there needs to be Peer Review as well as community enrollment with regard to health care.

HARRY E. BELLER, M.D.
Miami, Fla.

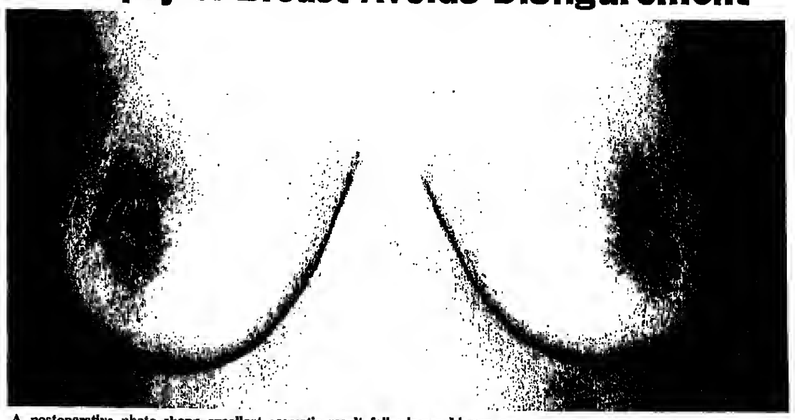
New Stereotactic Biopsy of Breast Avoids Disfigurement

Continued from page 1

in wondering if the cure may not be worse than the disease, at least for the 67 per cent of women biopsied who are proved not to have cancer," he declared.

Dr. Schwartz, who is Associate Professor of Surgery at Jefferson, said that the key to the new biopsy procedure is the stercotactic placement of needles as surgical markers for the lesions, prior to excision.

On the day scheduled for biopsy the patient receives repeat mammography in order again to locate the suspicious lesion. Its distance from the nipple is carefully measured on both the craniocaudad and lateral x-rays, and under local anesthesia, a 22-gauge 1.5-inch needle is placed in the breast and directed toward the expected site of the lesion. The x-rays are repeated to identify the needle's exact position in relation to the lesion.



A postoperative photo shows excellent cosmetic result following a biopsy on patient's right breast with Dr. Schwartz's procedure. Below, under local anesthesia, the breast is positioned on the x-ray plate and a 1.5-inch needle is directed toward the expected site of the lesion as a marker.

While the patient is under general anesthesia, a circumareolar incision is outlined with its center between the nipple and the line of the needle. The needle has been stereotactically positioned as a surgical marker for the lesion.

Needle Within 1 Cm. of Lesion

"If the tip of the needle is within one cm. of the lesion, it is fixed in place with adhesive tape and the patient is sent to the operating room," Dr. Schwartz said. "If the needle is more than 1 cm. from the lesion, a second needle is placed in the breast, using the first needle as guide, and the films are again repeated.

"In the operating room, under general anesthesia, a circumareolar incision is outlined with its center in the line of the needle. . . . If the suspicious area is minute, we usually excise about 1 cc. of tissue at the tip of the needle; when a larger area is seen on the x-ray, an appropriate sized piece of tissue is excised."

The specimen is then x-rayed and the picture developed within 90 seconds to make sure that the lesions have been excised, "with a very minimum of contiguous normal breast tissue, leaving the patient with an acceptable cosmetic result."

In 30 cases, Dr. Schwartz reported, "we have not yet missed the suspicious area."

The patient is discharged the following day, after the pathologist has embedded and sliced the entire section, and made his diagnosis.

Patients 'Less Anxious'

"We may thus give the patient the good news at the time she goes home, if the lesion is benign, or discuss the finding with her before discharge when malignancy is encountered," the surgeon stated. "Using this technique, we have noted our patients are less anxious when biopsy is recommended, because they are sure of a minimal operation, with a short hospital stay. No patient, subsequently discovered to have benign disease, has been sorry she underwent the operation, since no disfigurement has resulted. Patient acceptance has been universally excellent."

Turning to the problem of radical mastectomy, Dr. Schwartz again chided surgeons for performing operations that "do not have to be any more morbid or disabling than simple or total mastectomy."

Loss of the pectoral muscles need not be poorly tolerated, he declared, nor need radical mastectomy result in loss of motion of the ipsilateral arm.

"My patients may postoperatively look forward to participating in any activity they performed prior to surgery—golf, tennis, or bowling."

To illustrate his point at a news conference, Dr. Schwartz showed a photograph of a 75-year-old patient who had undergone a right radical mastectomy, including loss of the pectoral muscle. He noted the cosmetic excellence of the result, and added:

"This patient can do anything with her right arm except throw a forward pass. But then how many of our patients are quarterbacks?"

Coauthors were Drs. John D. Wallace, Research Professor of Radiology; Herman Libshitz, now at Duke University; and Gerald Dodd, now at M.D. Anderson Hospital and Tumor Institute, Houston, Tex.

Counselor Role With Married Patients Urged

Continued from page 3

cluding attitudes on sex, what kind of life style they foresee, etc. They should also decide how to handle such "trivial" items as who takes out the garbage, who pays the bills and handles the credit cards, which inlaws look like trouble and where the couple will spend Christmas.

Other hard questions should force the couples to ask themselves if the marriage breaks up who will take care of the children.

"In a great number of troubled marriages, you can almost be sure that it was a pretty bad marriage to begin with, so that the family physician should do what he can to prevent a mismatch when he can."

Should Get Both Sides

If possible, he continued, the physician should talk to both partners in a troubled marriage at the same time, although he may also find that he must talk to each partner separately to find out what is the real root of the problem. In all cases, however, he should get both sides of the story.

"Sometimes you find out that when a husband says his wife is no good in bed, or vice versa, it's because they spend so much time fighting outside the bed."

If a marriage has become dull, Dr. Mead suggested that the physician should encourage the troubled couple to find out what has to be changed to make the marriage lively and interesting again.

"Ask them," he suggested, "what can *you* do to make this marriage better? If you want to change your spouse first think of what you might do to change yourself!"

"Marriages, like people, can develop bad habits," Dr. Mead concluded. "And, as with personal bad habits, each couple should have the power and flexibility to change the habits that have altered the previously happy pattern of their marriage."

EDITORIAL CAPSULES

. . . brief summaries of editorials or comments in current medical and scientific journals.

Fetal Research Legislation

"The future of research involving human fetal organs and tissues is currently in jeopardy because of legislative attempts to place severe restrictive limitations on this type of study . . .

"Important advances in perinatal pharmacology have been derived from experimental procedures on the fetus. The understanding of fetal pharmacology led to a model of the interrelationships of drugs, bilirubin metabolism, and kernicterus, and the prevention of the condition. . . .

"Currently, an increasing number of children born with previously fatal immune deficiencies are alive because of the experimental development of fetal liver and thymus transplantation techniques. Both the research leading to these procedures and the tissue transplanted are dependent on the availability of fresh tissue from therapeutically aborted human fetuses . . .

". . . While no teratologist is calling for drug or chemical testing in man, surveillance and study of drug effects on the human embryo and fetus are essential if a second thalidomide tragedy is to be prevented . . .

"Many recent advances in virology have been dependent on human fetal material. Virologists have found that specific fetal tissues provide almost ideal culture conditions for human-specific viruses. . . . adenoviruses have been most successfully cultured in human fetal kidney, cytomegalovirus in human fetal lung, and respiratory viruses in human fetal tracheal tissues. Hepatitis virus has been grown in tissue culture of human fetal origin . . .

"We hope these words will encourage responsible pediatricians to participate in shaping public policy in these matters." *(Comment, Thomas H. Shepard, M.D., Alan G. Fantel, Ph.D., Am. J. Dis. Child. 128: 295, Sept. 1974)*

Chemicals and Cancer

"Every year some thousands of new chemical compounds are synthesized and brought into use in industry and some of these inevitably escape into the environment as contaminants of food, air, water and consumer products . . . We cannot have new products without risk, but it is irresponsible to permit new products without assessment of their risks . . ." *(Editorial, The Lancet 2:629, Sept. 14, 1974)*

Music therapy.

©1974 Medical Tribune

Ex-Psychiatric Cases in 'Orbit' Burden Florida

Medical Tribune Report

GAINESVILLE, FLA. — Most people think of Florida as the perfect spot for convalescence after a stay in the hospital, and psychiatric patients are no exception. And they are creating some severe problems for state facilities, according to University of Florida psychiatrist Richard E. Gordon.

The problems, Dr. Gordon told the psychiatry branch of the Florida Medical Association, spring largely from a group of unattached males who "orbit" to Florida after discharge from a psychiatric facility.

The majority are without the constraints that might lead to stable solutions: they have divorced their wives, quit their jobs, left their home states. Many have independent sources of income—pensions, social security, disability payments, the VA, or private funds—that enable them to maintain a peripatetic life style.

Though several states have large transient populations, none is as popular with these orbiting ex-patients as Florida, Dr. Gordon noted. Seven per cent of Florida's state hospital admissions last year were out-of-staters, compared to 0.3 per cent in California.

Improvement Suggestions

Interstate orbiters, Dr. Gordon said, overtax a community's social services, don't stay long enough for effective outpatient treatment, and often "gain" from remaining sick. He proposed several ways in which both patients and state might improve the situation.

These included incentives to settle in one place; halfway houses for disabled psychiatric patients; greater financial allowances for those living with their families than for those staying alone; financial rewards for occupational and recreational progress greater than for idleness.

He also urged that these ex-patients not be penalized through their various pension systems for entering gainful employment, but receive pay for rehabilitation in sheltered workshops. Their psychiatric ills, he said, should not be a means of avoiding sanctions and the need for behavior modification.

To assure adequate outpatient care, Dr. Gordon went on, hospitals should be paid on a capitation basis, rather than for per cent of occupancy. And finally, he hopes that Federal funds will become available to states like Florida for the care of mentally ill out-of-staters who come down out of orbit in their territories.

School Pinworm Screening Drives Urged

Continued from page 1

"Our awareness of these diseases has declined and surveillance has become negligible," Dr. Crowder declared, adding that a current rise in "hand-to-mouth" infections may have been significantly influenced by social changes.

Among these, she cited an increase in population, with crowded living conditions that contribute to inadequate disposal of solid wastes; and poverty, with accompanying malnutrition and exposure to environmental health hazards.

But one school innovation—wall-to-wall carpeting in classrooms—has also played a part, Dr. Crowder believes. The carpeting provides "excellent opportunities" for transmission of pinworm ova, and promotes transmission of scabies and pediculosis as well.

Dr. Crowder warned, too, that the generally beneficial custom of serving between-meal snacks at school will contribute to infection statistics unless there is adequate handwashing.

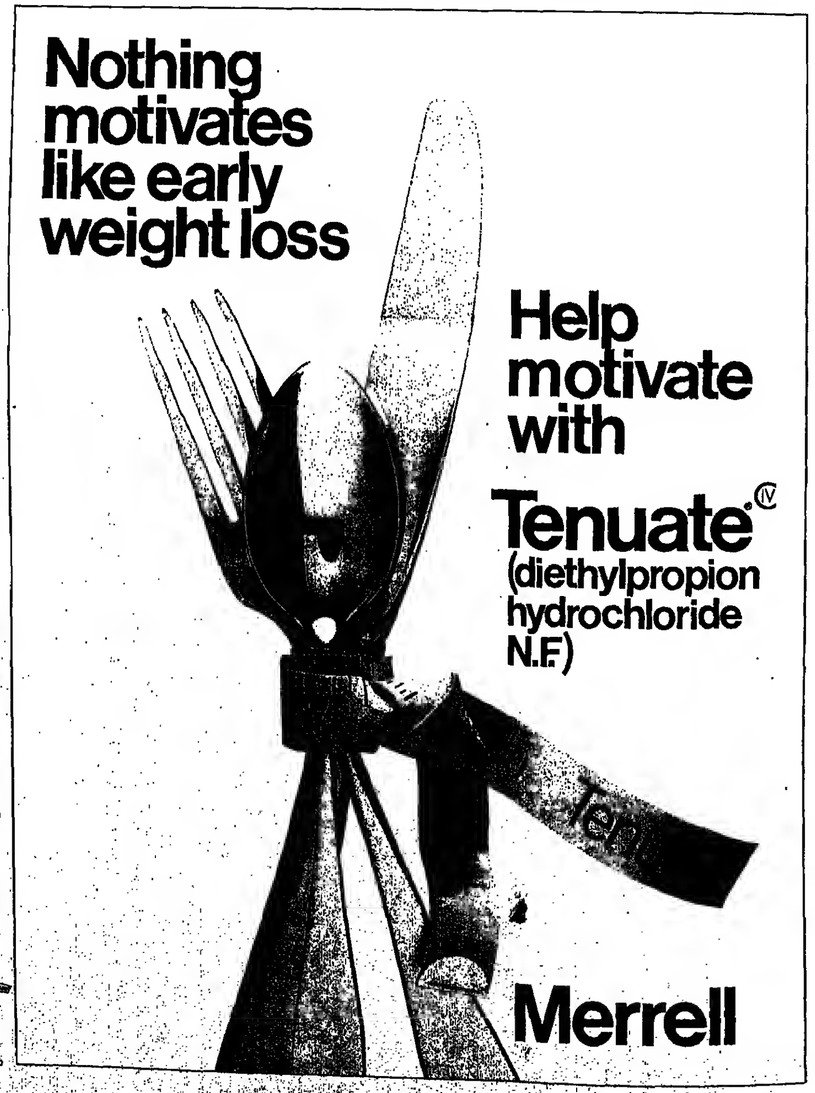
Physicians and educators concerned with child health were urged by Dr. Crowder to look into the situation at their local schools and see if programs exist to screen children for intestinal parasites. Data should be gathered on morbidity reports from the city or county health department, the incidence of such infections found by physicians in private practice, and the kinds of physical exams—if any—that are required by the school.

Dr. Howard B. Shookhoff, who heads the division of tropical diseases in New York City's health department, outlined the methods of treatment now recommended for six intestinal parasite infections.

- **Pinworm:** "The drug of choice at this time is pyrantel pamoate." Both it and pyrvinium pamoate are effective in a single dose, he said, but the former has the advantages of a lower frequency of nausea and a white (rather than a red) color. Some population groups object to red medication because it resembles blood, he noted.
- **Ascaris lumbricoides (common roundworm):** Piperazine has been the treatment of choice, Dr. Shookhoff commented. However, he now has the "distinct impression" that pyrantel pamoate is more effective.
- **Hookworm:** For moderate or heavy infections, "the most effective drug in our experience is tetrachloroethylene," given in a single dose on an empty stomach. Any anemia should be corrected before the drug is used.

The new agent, mebendazole, may be more satisfactory and less toxic, Dr. Shookhoff said.

- **Trichuris trichinm:** Mebendazole has been introduced primarily for the treatment of this infection, "for which we have until recently had no satisfactory oral medication."
- **Strongyloides stercomlis:** Thiabendazole is recommended, with pyrvinium pamoate as an "alternative treatment." Both are used in a suspension.
- **Trichinella spiralis:** In severe cases, treatment of choice is "the nonspecific use of steroids." Some specialists advise treatment with thiabendazole in addition, Dr. Shookhoff said.



Rauwolfia Studies Faulted for Methodology at FDA Meeting

Continued from page 1

1972 and produced the "entirely unsuspected" and therefore "unbiased" finding that women given rauwolfia alkaloids — principally reserpine — to control hypertension had a more than threefold greater risk of breast cancer than women who had not taken the drug. The English and Finnish studies were prompted by the finding in Boston and produced similar results.

Following reviews of the three investigations by representatives of the three study teams—Drs. Hershel Jick, Samuel Shapiro, and Bruce Armstrong, of the Boston, Helsinki, and Bristol groups, respectively—areas of possible bias were pointed out by NIH, FDA, and independent investigators.

The four "major deficiencies" in the studies, in the eyes of the National Heart and Lung Institute, were their possibly differential ascertainment of exposure to rauwolfia alkaloids, the possibility that their results reflected extraneous confounding factors such as previous hypertension that might influence rates of exposure to the drugs, difficulty in establishing an adequate time sequence between the supposed cause and its effect, and the validity of the exclusions used in establishing control groups, said Dr. Manning Feinleib, chief of NHLI's epidemiology branch.

Some Controls Excluded

In the Boston study, he noted, about 4.5 per cent of possible hypertensive controls were excluded because their previous medication was unknown—"a serious shortcoming since proper allocation of the unknown group could possibly alter the study's major findings." He also noted that about half the breast cancer patients in the Boston study had been taking reserpine for less than five years, which he called "a surprisingly short interval if the drug is indeed carcinogenic."

"More reliable data on duration of treatment must be obtained before any statement of 'causality' can be made," he said.

Robert T. O'Neill, Ph.D., an FDA statistician, commented that the three studies dealt minimally with the relationship between age, duration of reserpine use, and the occurrence of breast cancer.

"The data in the three studies may not be able to answer this question, which certainly is of relevance in determining the subpopulation of women at the greatest risk," he said. "When considering hypertensive women alone, the data in the Boston study indicate a significant risk of breast cancer associated with reserpine use as compared with the use of other hypertensive agents. The Finnish study appears to give no such evidence. The English study, with other neoplasms not excluded, is suggestive of an increased risk."

Questions requiring further study, he said, are the adequacy of the control groups as representatives of the hypertensive population and of users of reserpine and other antihypertensive agents; the relationship between duration of use, age, and increased risk of breast cancer; the influence that users of undetermined antihypertensive drugs may have had on the studies' results; case and control exclusion criteria, and the adequacy of case and control selection in the three investigations.

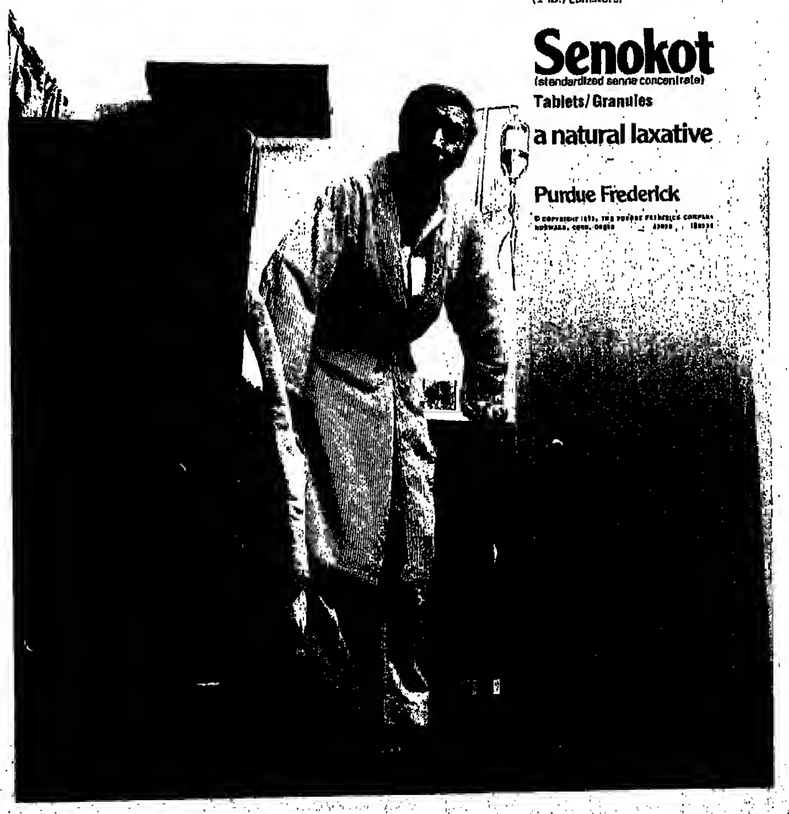
Dr. Norman M. Kaplan, a representative of the American Heart Association, urged that reserpine and other rauwolfia derivatives should not yet be restricted and that additional studies be undertaken to provide more definitive evidence about their carcinogenic potential.

Not only are the three studies of reserpine methodologically wanting, but "the abrupt removal of its use may put millions of hypertensives at increased risk of cardiovascular catastrophe," said Dr. Kaplan, a Professor of Internal Medicine at the Texas Southwestern Medical School, Dallas. He found four basic faults with the studies:

'Spuriously Low Exposure'

- "The control populations almost certainly had a spuriously low exposure to reserpine. In the Boston study, all patients with any cardiovascular disease were excluded, thereby removing most of the potential reserpine users. In the English study, only 0.43 percent of the controls had exposure to reserpine. Based upon crude estimates that 33 percent of women over 50 have hypertension and that one-fourth of these are on antihypertensive therapy and, in turn, one-fourth of these are on reserpine, the exposure should be 2 percent."
- All three studies were retrospective.
- "There was unevenness in the matching of users and nonusers in the 50- to 59-year age groups of the Boston series and a decreased proportion of such patients in the Finnish series."
- "Two potentially important risk factors for both hypertension plus reserpine use and carcinoma of the breast were not taken into account, namely, body weight and parity."

Dr. Howard D. Cohn, vice-president of the CIBA-Geigy Corporation, reserpine's principal manufacturer, and medical director of the company's pharmaceuticals division, criticized the studies for their use of the relative risk concept and also disputed the applicability of their results to the general population.



Tribune Economic Analysis

Helping the Stock Market's Investors

BY ELIOT JANEWAY
Consulting Economist

The stock market has now been hurt so badly and is hurting so many people that remedial measures are becoming nearly as practical as public service jobs for the unemployed. The bill introduced by Sen. Lloyd Bentsen (D.-Tex) points the way to help the stock market. But although Sen. Bentsen has been a voice in the wilderness on the subject, it does not go far enough. The Bentsen Bill calls for liberalizing the long-standing taxpayer's right to deduct $1,000 a year of market losses from taxable income by increasing the deductible limit to $4,000. The rationale is that everything else has quadrupled since this deduction was legalized.

The theory is fine, but putting it into practice on the scale of $4,000 per taxpayer, with losses per year, will not help them or the market or the situation. The way to bring first aid to everyone wounded in and dependent upon the stock market is to liberalize the ceiling to a meaningful amount—or, better still, to take the ceiling off altogether—subject to conditions that will protect the public interest, bring relief to victims of the storm and pump life back into the market.

Attaching two such conditions to this liberalized loss-taking would help revitalize the Treasury as well as the market. The first is similar to the deferral privilege given homeowners who take a profit setting and theo reinvest in a new home. It would require reinvestment within six months in securities paying interest or dividends taxable as ordinary income. The other would require some reasonable but meaningful portion of the reinvested proceeds of loss-taking to go into non-negotiable U.S. Treasury securities, which would pay interest taxable as ordinary income.

There's no shortcut to beating inflation except for taxpayers to have an incentive to buy and hold Treasury securities for a period of years.

With all your harping on liquidity, you seem to write only for the fat cats. I'm a young physician, just starting out. These high interest rate investors are starving me. Where can I borrow money cheaply?
Young M.D., New Jersey

Absolutely nowhere. That's the cause of the trouble! The banks and the fat-cat retailers are making more money lending on small loans than on anything else—twice the prime rate. Your only recourse is to try to put aside a little cash and use the buying power it will give you as a bargaining lever. Remember: those trying to sell you are apt to need cash even more than you.

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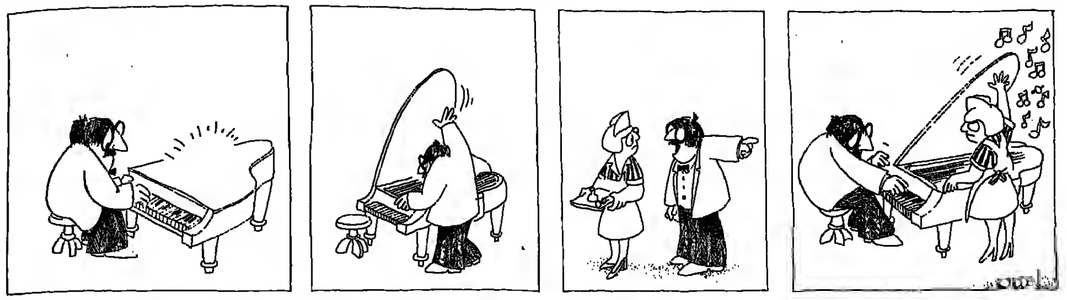


TRIBUNE SPORTS REPORT

Middle-Aged Fitness Fans Warned About Jogger's Heel

Medical Tribune Report

NEW YORK—Jogger's heel—the latest side effect of the fitness craze—continues to pop up in radiologic and orthopedic practice, a leading radiologist reported here.

Warning "gung-ho nonathletes" to take it easy, Dr. Tom W. Staple of St. Louis said radiologists are seeing examples of painful heel calcification in the overeager middle-aged male jogger, as well as in out-of-practice young athletes.

He explains that "jogger's heel" results from the repeated stress of flat-footed trotting, and appears on the x-ray as a "cloud of density in the heel. It stems either from compression of bone or the laying down of new bone."

Dr. Staple, who is Professor of Radiology at Mallinckrodt Institute of Radiology, Washington University, told a Medical X-Ray Forum for Science Writers: "You see jogger's heel in the 40-year-old guy who is gung-ho and planning to get back into shape or in the young guy who has done nothing all winter and wants to impress the coach at the spring training turnout."

He commented that the majority of what are called athletic injuries are seen in amateurs or in nonathletes, rather than in professional athletes. "I suggest that such injuries should not be called athletic injuries, but injuries from participation in athletics," he said.

Dr. Staple estimated that approximately 40 per cent of the most common stress fractures occur in the heel, another 40 per cent in the forefoot, and the remaining 20 per cent in other portions of the skeleton.

The X-Ray Forum was sponsored by the American College of Radiology.

A normal heel (upper x-ray) compared with a "jogger's heel," showing either compression of the bone or the laying down of new bone.

Muscle Relaxation Credited to Acupuncture

By PATRICIA McBROOM
Special Tribune Correspondent

PHILADELPHIA—One effect of acupuncture may be to relax chronically tense muscles, according to preliminary observations by a psychiatrist at the University of Pennsylvania School of Dental Medicine.

With an electromyograph, Dr. Arnold H. Gessel has recorded substantial declines in muscle tension at the site of pain in two patients after acupuncture. The decreased tension—in muscles tight to the point of spasm—compared with the best results of biofeedback control, said Dr. Gessel, a specialist in biofeedback and relaxation therapies.

Dr. Gessel conceded that two cases were a very small series, but said that since the changes seen were profound and clearly linked in time to the acupuncture treatments, and an investigation should be undertaken into the relationship between acupuncture and muscles relaxation.

"I think muscular relaxation could explain some of the reported effects of acupuncture," said Dr. Gessel. "This has all the earmarks of a real phenomenon."

Dr. Gessel also tested muscle tension in six other acupuncture patients, all but one of whom showed decreased contraction rates after the twenty-minute needling session. Contraction rates declined from moderately elevated to normal during and after the acupuncture.

Most of the patients in the study had a diagnosis of arthritis, with pains in the back, hip, shoulder or legs.

2 Cases Described

In a report to the World Acupuncture Conference in Philadelphia, sponsored by the University of Pennsylvania, Dr. Gessel described one of his two cases as that of a 50-year-old woman with pain and numbness of the right shoulder and arm. The right trapezius muscle was extremely tight, with spasmodic levels of contraction—about 100 microvolts—before acupuncture, despite ten minutes of relaxation prior to treatment. Normal EMG readings, Dr. Gessel said should have been about 15 microvolts.

When the needles were placed, readings on the trapezius declined to 50 microvolts and by the end of the acupuncture session, they were at 10 microvolts. The same phenomenon occurred at the second acupuncture session. On the third occasion, the woman said she was feeling better. That day, for the first time, muscle tension in her shoulder read 80 microvolts rather than 100, before treatment.

Dr. Gessel speculated that acupuncture over time may have "retrained" the muscle to lower rates of contraction. He did not know why needles should have such an effect, especially since they were not placed in the muscle itself, but in traditional acupuncture points aimed at shoulder pain.

In the second case, a fifty-year-old man was treated for pain in his calf, which he said was due to phlebitis. Dr. Gessel's electrodes picked up tension readings of 400 microvolts on the gastrocnemius muscle in the calf (compared to normal readings of about 25 microvolts in the relaxed state).

After acupuncture, EMG readings dropped to 150 microvolts. Clinical improvement is as yet undetermined, Dr. Gessel said.

IMMATERIA MEDICA

By DUDLEY STRAUS

Odds and Ends

• Ethnic note: we see, in an HEW release, that the Navy Alcohol Abuse Control Program is referred to as the AACP.

• The First Hair Transplant Symposium and Workshop was held in Hot Springs, Ark., and featured "a comprehensive series of lectures and panel discussions, and a workshop with cadaver heads," we learn from a recent release.

• *New Scientist* reports that the *Toronto Star* reports that a Pompano Beach, Fla., man has developed a talking tombstone that also shows moving pictures of the deceased. No popcorn machine, as far as we know.

• "Washington (UPI)—The House today came within six votes of settling an eight-year-old fight of what to do about the crumbling west wall of the Capitol Building, and agreed to put off a decision for another two years."

—United Press International wire service.

And that's where we are these days.

• ". . . and assuming that it requires an average of one pack [of cigarettes] a day for 20 years (146,000 'coffin nails') for an individual to develop lung carcinoma . . ."

—Minnesota Medicine.

Wait till you start coping with the metric system!

• "An HEW study of the biologic and behavior changes of age indicates the aged demonstrate 'great reserves of energy, intellect, and enthusiasm' in adapting to circumstances."

—release from the National Institute of Mental Health.

Now if you'll just name some circumstances . . .

• Dr. Milton H. Erickson of Phoenix found an old friend in a new form in the *Phoenix Gazette*:

"Abdominal incisions always can be seen, although in some instances they can be concealed by the public hairline."

Doctors' Debate

MEDICAL TRIBUNE frequently receives extensive and well-documented communications from physicians on current subjects of controversy or those of great current medical interest. We invite contributions in these areas for presentation in this new feature.

Death Belongs to Physician

The matter of determining or certifying death continues to plague a number of our abstract philosophers. The consensus in protocol and at least legislatively is that the determination of death is the responsibility of physicians, basing their decision on customary standards of medical practice.

It should be further clarified that the determination of death is a diagnosis. If this simple fact of practice is understood, there is less controversy.

The public as a whole, and individuals in particular, go to the physician for the diagnosis of a variety of complex, subtle, and sophisticated diseases. They trust their physicians.

The guidelines for physicians are threefold. First and foremost is the physician-patient contractual relationship. This may be implied or explicit. When a patient comes to a doctor's office or when a patient enters a hospital, he expects to have his condition or his disease treated and rectified. Second, there is an ethical guide which mandates that the physician shall do everything in the best interests of the individual patient. To do the best things in the best interests of society primarily would lead us into a Pandora's Box of physicians with an unacceptable power—a utilitarian ethic and a disrespect for life. The physician's ethic can best be summarized for a civilized society in the simple phrase: "Love thy neighbor, and do unto others as you would have them do unto you."

Third, the physician is guided by scientific competence in making decisions, whether it relates to cancer of the stomach, gallbladder disease, brain tumor, or indeed the recognition of the irreversibility of functional processes. After assessing the presenting factors (signs and symptoms), he may appropriately come to a decision, based only on his objective criteria.

Since death is a diagnosis and since it is faced continuously by physicians in practice, it is curious that we have so many philosophers in the abstract, who intrude into an area in which they have little or no expertise and indeed competence. For Robert Veatch to intrude into an area of science is indeed not just a curiosity but also an insidious activity that only leads to confusion in the public mind.

Before Mr. Veatch starts commenting on highly technical elements, such as that presented by Dr. Boshe on EEG activity or on other criteria, which together result in a diagnosis, Mr. Veatch should take an adequate internship as a hospital chaplain or philosopher and be a firsthand observer of the diagnostic process. To be tempered in the fire of actual duty, obligation, and responsibility usually enables a person to gain a respect for life and to understand the dilemmas that may be faced. Until this is done, armchair philosophers should cease and desist from creating an atmosphere of fear and chaos.

There comes a moment of truth at the bedside of a patient with a serious illness, who indeed may be in the dying process. This moment of truth is not a time of decision for philosophers. The over-all statement "the patient as a person" should be the determinant.

VINCENT J. COLLINS, M.D.,
Chairman, Department of
Anesthesiology
Cook County Hospital
Chicago

Surgical Approach to the Lumbar Disk

I cannot agree too strongly with Dr. J. Dewitt Fox that most neurosurgeons would take exception to Dr. Norman Shealy's approach to the lumbar disk syndrome by attacking what he feels to be the mechanism of pain conduction. Aside from the inherent unsoundness of attacking any pain problem as the primary target in a disorder where pain has a correctable or removable source, it is my feeling that the reputation for poor results in the surgical management of lumbar disk and related syndromes is largely unjustified and mostly related to poor comprehension of the problem, with resultant poor selection of patient and poor selection of operative procedure.

The dwelling, by both Dr. Shealy and Dr. Fox, on the fallibility rate of myelography makes at least part of my point. The diagnosis of herniated nucleus pulposus is a *clinical* diagnosis based on history and careful neurologic examination. In my opinion, myelography is not indicated and should not be done where the history and findings are unequivocal and the level of disability and duration of symptoms indicate the necessity for surgery. In my opinion, myelography has a substantial fallibility rate (whether 15 per cent or 30 per cent is immaterial), and its usefulness is primarily in those atypical back and radicular syndromes where bilaterality of symptoms and/or findings, or the indication of multiple segment involvement, may suggest other problems.

My experience of nearly 30 years in

Continued on page 26

Exercise Stressed to Reduce Crippling of Hemophiliacs

Medical Tribune Report

NEW YORK—The key roles of exercise and nonsurgical management in preventing or lessening the musculoskeletal crippling of hemophilic patients were described here by Dr. Shelby L. Dietrich, of Orthopedic Hospital, Los Angeles.

Dr. Dietrich, who heads the hospital's hemophilia treatment center, now with some 300 patients, said its habilitation program rests on the Hippocratic maxim that "activity strengthens and inactivity weakens."

Patients are urged to take part in functional and recreational activities appropriate to their age after evaluation by a multidisciplinary team, she said, speaking at a conference on hemophilia cosponsored by the New York Academy of Sciences and the National Hemophilia Foundation.

Emphasizing the importance of prompt attention to a hemarthrosis, Dr. Dietrich advised that treatment with plasma concentrates should begin even before swelling is evident. If an effusion is present in the knee, ankle, or elbow, the center's policy is to perform aspiration under coverage of concentrate when the level of factor VIII or factor IX reaches 30 per cent of normal.

On Crutches for Day or Two

'After aspiration of the knee, the patient uses crutches for one to two days. Isometric quadriceps exercise is started when the affected knee is pain-free, and the patient later progresses to more active exercises.

A study at the center of 50 knee arthrocenteses managed in this manner showed a significant decrease in the short-term morbidity associated with hemarthroses, although the ultimate effect of such therapy on the development of chronic hemophilic arthropathy is not yet known.

Hemorrhage into a major joint may initiate a cycle of bleeding, immobilization, atrophy of muscles adjacent to the joint, weakness, and synovitis—a situation Dr. Dietrich describes as leading almost inevitably to recurrent bleeding, chronic synovitis, and finally cartilage and bone destruction.

Prevention of this cycle, and arrest of progressive joint damage, may be possible "by vigorous and early application of medical, orthopedic, and physical therapeutic measures."

The center employs daily short-term prophylaxis with the proper concentrate to protect the joints from further bleeding and to permit active strengthening exercises. When synovitis is a prominent finding, treatment includes administration of anti-inflammatory drugs (in short courses) as well as analgesics.

The treatment of chronic synovitis of the knee begins with isometric and active-assistive exercises and progresses according to the patient's tolerance. Concurrently, a special cylinder case or splint may be used to protect the knee.

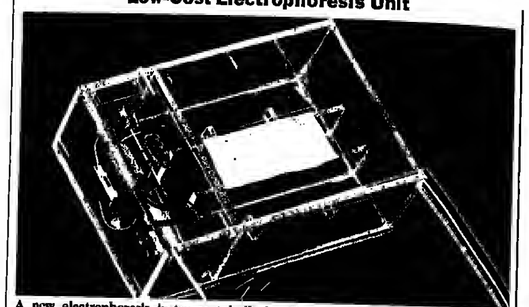
Plasma Concentrates Given

Rehabilitation of the hemophiliac who has undergone reconstructive surgery does not differ significantly from that of the nonhemophilic patient recovering from a similar procedure, Dr. Dietrich said. Plasma concentrates are given to maintain a factor level of 30 per cent of normal during the postoperative period, and appropriate exercise is started at that time.

'Family Medicine Units'

MONTREAL — Government-financed "family medicine units" are being set up in five hospitals affiliated with McGill University to look not only at patients but also at relevant social pressures on their families.

Low-Cost Electrophoresis Unit



A new electrophoresis instrument built by biomedical personnel at the Naval Electronics Center in San Diego costs only $150, including parts and labor. The cell, using a built-in power supply and an acrylic body, is based on a design developed at Yale-New Haven Hospital.

One Man...and Medicine

ARTHUR M. SACKLER, M.D.,
International Publisher, Medical Tribune

Postmortem

When Doubleday sent me the book *Post-Mortem*, I noted the author was David M. Spain, a physician often in the news in civil-rights cases. In the line of duty, I tackled *Post-Mortem*. What I found was interesting. I thought the book would plug political pathology—it told of a highly personal pathology. I expected passionate partisanship—I found the author revealed as a liberal but a pathologist who tries to put his prejudice and preferences aside when he picks up his scalpel for a postmortem.

"It would seem that unremitting exposure to so much ugliness, pain, and deceit would instill a cynical and despairing view of humanity. However, the contrary is true." Before going forward to the dissecting table and studying the *"cut up bits of former life,"* Dr. Spain has *"a self-imposed daily routine of silent prayer composed of the words spoken by Shakespeare's Hamlet: 'What a piece of work is man! how noble in reason! how infinite in faculty! in form and moving how express and admirable! in action how like an angel! in apprehension how like a god! the beauty of the world! the paragon of animals!'"*

With genuine humility, this pathologist examines himself again and again, challenging his own preconceptions, often altering his viewpoint. *"I firmly believed that a doctor had no right to play God and decide when to terminate life. I was categorically opposed to abortion, euthanasia, and suicide. My role was to prolong life, no matter what, even if the patient was dying and in the throes of an agonizing seizure."*

I, personally, have long believed and still believe in the right of the individual to abortion and euthanasia, but I am becoming more concerned with the doctor's "right to play god and decide when to terminate life." Dr. Spain has moved the other way and relates it to his experience with murderous illegal abortions and unwanted and battered children.

A Question of Suicide

In respect to suicide, Dr. Spain writes a revealing and touching passage: *"A meeting with a Catholic priest over the wording on a certain death certificate helped me. . . . In my first week as medical examiner, I had certified the death of a middle-aged Catholic man as 'Suicide caused by self-inflicted gunshot wound of the head.' The same day, shortly thereafter, a young Roman Catholic priest from a Yonkers parish came to discuss the wording on this death certificate. He discreetly explained that he had no desire for me to alter my professional evaluation of this or any other case. He then told me something I should have known but of which I confess complete ignorance at that time. The Catholic Church regards the taking of one's own life as a sin, and for this reason the victim cannot be buried with the full sacraments. I suddenly realized that that was the way I felt about suicide too, and that it certainly was no distortion or compromise with the truth to add, 'while temporarily mentally disturbed.'"*

How human and humane a reaction.

Dr. Spain's partisanship is clearly stated and equally clearly put aside again and again for nonpartisan and bluntly honest positions as dictated by his findings of fact. Does this "civil-rights pathologist" let his heart rule his head in favor of the poor or the little man, regardless of the evidence? No; with him the facts rule. Witness his findings in a suicide case wherein the surviving wife would have received double indemnity if Dr. Spain had not noted that, though the man was killed by a train while ostensibly fixing a flat tire, he, the pathologist, helped determine that no tire on the car was flat.

"If this staged suicide had not been exposed, the family would have received the one hundred thousand dollars. The testimony of the train engineer, the absence of any defects in the tire, the seemingly contrived hand smudges, and the background of the personal and financial difficulties convinced me that this was a case of suicide. . . . The jury upheld my official opinion and returned a decision in favor of the insurance company."

Letting Facts Rule

When called as an outside pathologist in regard to several suicidal deaths at "The Tombs" prison in New York City, Dr. Spain found one of them suspicious of homicide and, as to the other, the *"autopsy revealed no evidence of any beating, and the findings supported the original conclusion that Roldan's death had been suicide by hanging. I reported to the Lords that I concurred with the medical examiner*

Continued on following page

Low Renin's Protective Role In Hypertension Unverified

Medical Tribune World Service

LOUVAIN, BELGIUM—The hypothesis that low renin activity protects hypertensive patients against stroke and heart attack is not supported in a retrospective study of 59 patients hospitalized and discharged with a final diagnosis of essential hypertension.

The patients were divided into three groups on the basis of plasma renin determinations by Drs. Roland Strooband, Robert Fagard, and Antoon K. P. C. Amery of the Hospitol St. Rafael here.

There were 20 patients in the low renin group (concentrations below 7 units per ml.), 19 in the middle group (7 to 13.9 units per ml.), and 20 in the high renin group (concentrations above 14).

The investigators found no significant differences among the three groups with respect to other known risk factors for cerebrovascular and coronary heart disease, including sex, age, family history, obesity, cigarette smoking, blood pressure, and plasma cholesterol and lipids. But unlike earlier investigators, they found no significant differences in incidence of stroke, heart-failure, and heart attack in relation to the different plasma renin levels.

In the high renin group, one patient had all three complications and two had heart attacks; in the middle group, one patient had both heart-failure and heart attack and two had strokes; and in the low renin group, two had heart failure, one had stroke, and one had heart attack.

The investigators suggest that until large-scale prospective investigations are undertaken, therapeutic considerations derived from the existing data could be premature.

Swiss Smoking Doubles

Medical Tribune World Service

GENEVA, SWITZERLAND — Cigarette consumption per capita has doubled in Switzerland during the past 10 years, according to statistics of the Anti-Alcoholic Association of Switzerland, and pulmonary cancer mortality has been climbing almost as fast.

One Man & Medicine

Continued from preceding page in the finding of suicide." When the Young Lords, a militant Puerto Rican group, tried to distort his findings, Dr. Spain informed them: *"In the future we will deal with each other on a day-to-day basis of mutual mistrust."*

"Madison Avenue Murders"

In his section on "Madison Avenue Murders," Spain reviews his participation in the studies and reports which indicted cigarettes in regard to lung cancer. It was a fight to which he is passionately dedicated. *"It makes my hackles rise to hear patients say: 'My doctor is a regular guy: he lets me do anything I want.'"* He attacks the A.M.A. for accepting a $10,000,000 gift from the Tobacco Research Committee.

He also seeks to dispel two current myths. Advocates of the legalization of marijuana claim that the smoke of "grass" is not cancer producing. *"To the contrary, recent studies indicate that smoking of five joints a day, with the holding of each puff in the lungs ten seconds, has the equivalent adverse effect on the lungs as smoking more than a pack of cigarettes. The other illusion is that a safe cigarette will soon appear on the market."* This he does not foresee. *"Approximately one million lung-cancer deaths have been reported in this country alone since the day I saw a case of lung cancer for the first time—over thirty years ago, at the Baltimore City Hospital."*

Dying From 'Cures'

David Spain writes: *"Any rational individual will agree that, on the whole, modern medical practices have done vastly more good than harm. Nevertheless some patients do die from their cures. . . . I have written a textbook for the medical profession on this subject of doctor-induced diseases. . . . Ironically I found myself on the side of the defendant, the gigantic international XYZ Chemical Corporation."* In this case, the claim was made that a drug was responsible for a particular pulmonary condition. *"In reviewing the history of the case . . . I became convinced that* [the] *original physician was the real culprit. . . . I did not find the drug company derelict. . . . It was large, rich, and impersonal. It was logical to attack it . . . and despite evidence to the contrary and my expert testimony* [the plaintiff's lawyer] *won the case and received a substantial award for his client."*

Post-Mortem takes you behind the headlines in the sensational trial of Alice Crimmins in New York, the deaths of three civil-rights workers in Mississippi, and the death of Fred Hampton, the Chicago Black Panther. Here is a pathologist whose reports on real life recall that of Sir Arthur Conan Doyle. Here is a man who calls himself a "civil-rights pathologist" but whose conscience dictates that when he steps through the door into the pathology laboratory and autopsy room he must tell it as he sees it under the microscope or on the autopsy table.

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Transfer Factor

IT WAS IN 1942 that Landsteiner and Chase, with the use of peritoneal exudates, demonstrated the cellular transfer of delayed skin hypersensitivity from sensitized to unsensitized guinea pigs. Later work showed that cells from blood, spleen, and lymph nodes were equally effective. We now know that delayed hypersensitivity is part of the complex we call cellular immunity, for which the circulating, thymus-dependent, small lymphocytes —the T lymphocytes—are responsible. Humoral immunity, the development of antibodies, resides in the B lymphocytes, which mature under the influence of the bursa of Fabricius in chickens and an unidentified equivalent in man.

Dr. H. Sherwood Lawrence (see page 12) has intensely studied the Landsteiner-Chase phenomenon. He first showed in human beings the effectiveness of viable blood leukocytes in transferring delayed skin sensitivity to tuberculin and to streptococcal antigens. He then went on to demonstrate that extracts of human leukocytes were equally effective in transferring systemic states of delayed hypersensitivity. The extracts were prepared by freezing and thawing or by osmotic lysis. He has succeeded in clearly characterizing the transfer factor (TF) as a small polypeptide-polynucleotide of less than 10,000 molecular weight.

This soluble, dialyzable, lyophilizable substance, which is not a protein, not an immunoglobulin, and not immunogenic, is immunologically specific, converting normal lymphocytes in vitro and in vivo into an antigen-responsive state so that in the presence of the antigen these converted lymphocytes proliferate into a clone of specifically reactive cells. Cellular immune deficiency diseases have been successfully treated with TF, as have such serious disseminated infections as vaccinia, mucocutaneous candidiasis, coccidioidomycosis, and lepromatous leprosy.

Of enormous interest today is the use of TF in the treatment of neoplastic diseases. Encouraging results have been secured in malignant melanoma, and in this issue of MEDICAL TRIBUNE there is a report (see page 1) of Dr. H. Hugh Fudenberg's work in using TF to treat osteosarcoma.

This remarkable substance may turn out to be extraordinarily effective in therapeutic medicine. It is now upwards of 30 years since the report by Landsteiner and Chase of an obscure, immunologic phenomenon they had observed in guinea pigs. Their work was basic science in animals. Dr. Lawrence's work was basic science in human beings. Such work is the prerequisite for practical application.

Energy Crisis

THE MEANING of "Ill blows the wind that profits nobody" is that there is someone who profits from almost every disaster. And no matter what statements the oil companies make, their most recent earnings demonstrate they have amply profited from the energy crisis and from the Arab oil embargo.

Nonetheless, with the upsurge in fuel costs, it has become feasible to investigate substitutes for oil. For some time now, domestic wastes have been processed in a number of plants to yield shredded material for addition to coal-fired boilers to generate steam and power. In at least one such project, 10-25 per cent of coal fired has been replaced by waste.

A more ambitious project includes processing garbage, manure, and solid wastes into a slurry that is anaerobically digested to yield gaseous products—about half methane and half carbon dioxide. Pyrolysis of wastes at about 900° F. can yield about one barrel of oil per ton of wastes, plus gas and water. Suggestions have also been made to add ethyl alcohol—which can be readily produced—to gasoline in amounts of 5 to 30 per cent and increasing the octane number.

So the energy crisis may profit us all, ultimately, in various ecologic ways. What is to be feared is that changing from cheap energy to expensive energy will cost us dearly in such areas as education and research.

"I haven't the slightest idea how I'm doing. The youngest doctors tell me to 'hang in,' and the older doctors just say 'hang on.'" ©1974 Medical Tribune

LETTERS TO THE EDITOR

Brevis oratio caelum penetrat

Abortion, No–1

Your front-page article (January 23) crediting legalized abortion with producing "health advances" would appear to be nothing more than a bit of self-serving, pro-abortion propaganda. All of the statistics cited (i.e., the reporting, compiling, analysis, interpretation, etc., of said statistics) must be presumed to be in the hands of liberal abortion advocates. And one could hardly expect *them* to be searching very diligently for evidence that conflicts with their prejudices. For example, here in California, liberal abortion advocates have admitted (only under pressure, of course) that some legal abortion deaths are not reported as such.

Consequently, in the absence of exhaustive and reliable corroborative evidence which could conclusively contradict the above statements, any statistics or justification such as those you've presented deserve to be greeted by any true scientist with liberal amounts of healthy skepticism.

In a similar vein, your "report" on page 35 would have done greater service to your credibility if it had been placed on the editorial page.

JAMES H. FORD, M.D.
Member
Committee for the Continuing Study of Evolving Trends in Society Affecting Life
California Medical Association
Lynwood, Calif.

Abortion, No–2

It was a sad day for our country and our profession when the Supreme Court ruled in favor of legalizing abortion. This was the day our great country and our profession lost respect for human life.

During this past year some 800,000 lives were brutally ended by abortion, and your staff writer Margery Bernett has the audacity to state that since this Supreme Court decision "the neonatal death rate dropped an astonishing 5 per cent below the first eight months of 1972." To me such a statement should not go unchallenged and unanswered.

There are times in medicine when one cannot completely separate medical and moral aspects of a situation. It is my opinion that there is absolutely no conflict between good morality and good medicine. When something is immoral, it almost invariably is bad medicine. Abortion is such an issue. I feel that our profession is playing a prominent role in the moral decline of our country.

I hope that the lessons we in this country must learn will not be too bitter before we change our attitude toward abortion.

JOSEPH W. KOLP, M.D.
Canton, Ohio

Editor's note: Our reporter's "audacity" was derived from the National Center for Health Statistics. They of the center drew the graph, not she.

Abortion, Yes

Your recent front-page article on abortion leaves me utterly confused and depressed. It is incomprehensible to me how these vociferous antiabortion forces intend society to deal with the most significant problem of all mankind—*overpopulation*.

What does our society need with the 400,000 (potential) human beings that Dr. Michael F. Dolan (February 6, page 13) says have been "killed" in New York City alone between 1970 and 1972?

We are *finally* having to face the rather stark reality that our finite earth cannot supply the energy, the natural resources, to sustain unlimited population. When and if ignorance and apathy prevail and/or contraceptive measures fail, it seems to me that abortion must become more essential every day.

I feel that abortion should be made mandatory in certain instances, and that previously assumed inalienable right to bear children must be challenged when it conflicts with the best interests of society. If there is to be any kind of a meaningful future for

Continued on page 29

Severe Pain of MS Is Eased By Dorsal Column Stimulator

Continued from page 1

marked increase in the frequency and amplitude of reaction in the muscles of her legs.

Before DCS, she had intention tremor, dysmetria, and dysdiadochokinesis in both arms. "It was hard for her to sit up in bed and she had a tendency to fall when standing," Dr. Cook said. "After DCS, ataxia disappeared." He also observed that such indications of brain-stem disturbances as moderate dysarthria, scanning speech, and deep, rasping voice also disappeared. Finally, a number of parameters of sensory dysfunction also returned to normal with DCS, except for plantar hyperalgesia, which persisted.

Used in Several Institutions

DCS is being used at several U.S. institutions as a nondestructive surgical method of treating severe, intractable pain. Dr. Charles Burton, Associate Professor of Neurosurgery, Temple University Health Sciences Center, Philadelphia, who has been working with electrical stimulation of nervous tissue—or neuromodulation—for pain reduction, told MEDICAL TRIBUNE: "To my knowledge, Dr. Cook is the first person to have used DCS for multiple sclerosis. If he continues to achieve consistent improvement in MS patients, it could have very important implications, not only for MS but for the whole new area of neuromodulation in living systems."

Originally, Dr. Cook implanted four platinum -electronic contacts in the subdural, extra-arachnoid space over the center of the upper thoracic spinal cord. A radiofrequency current energizes the bipolar electrodes, and an external transmitter delivers the current to a subcutaneous radio receiver. The voltage and frequency of a miniaturized, battery-powered transmitter are regulated by the patient, according to functional response. In his later implantations, Dr. Cook has placed the DCS within the layers of the dura to avoid heavy scar tissue formation.

Stimulation Begins in 10 Days

About 10 days after implantation, stimulation begins, along with appropriate physical therapy. Results are evaluated by neurologic examination, electromyography, cystometrogram, thermography, and before-and-after motion-picture studies.

The New York neurosurgeon tests MS candidates for implantation by their response to percutaneous electrical stimulation. If there is no response, the likelihood is that there will be no response to permanent DCS.

"If there is movement or some residual function in the legs, it indicates that some nervous tissue is left alive. The hope is that there may also be intact neural structure that can be brought up to the impulse propagation level to overcome the conduction defect. We must see paresthesias in the legs. We've seen patients who are not paralyzed and seem to have good function, but if we can't induce paresthesias, they probably won't be helped by implantation. We also look for an increase in lower-leg temperature, activation of the electromyogram in both lower and upper extremities, and some increased movement ability. If percutaneous stimulation does not accomplish at least that much, then we can be pretty sure that DCS won't do anything."

Dr. Cook said that he would not implant a DCS in a very young patient who has a chance of total remission—or in the very old with far advanced disease, because stimulation has little effect on severe MS in the aged. Generally, he feels that "the more severe the disease, the less effect we can expect from DCS. If the nerve tissue is already functionally dead, stimulation will not activate propagation of impulses."

For diagnosis and determination of disease stage, Dr. Cook uses the Kurtzke scale: grade 1 is an absence of disability; grade 9 is total disability. "If we have a patient at grade 7, we may be able to improve function to grade 5 with a DCS, but the disease progresses in its usual manner; with stimulation he may deteriorate to grade 6, but when we turn the stimulator off, he goes down to grade 9. In other words, DCS can hold the functional disability below the expected disability."

Now in Her Third Year

DCS pulled Mrs. R.—a grade 7 patient—to functional grade 5. She is now in her third year of stimulation and has had the expected progression of MS. Even with DCS, she is now at a lower level of function than three years ago; but when stimulation is withdrawn she declines even further and becomes completely bedridden.

Dr. Cook cited a grade 9 patient, paralyzed and bedridden and completely unable to care for herself. She had severe ataxia and violent static and kinetic tremor. Arms flailing, she had beaten herself black and blue. Her speech could not be understood.

"With DCS, she is quiet while resting, and without the violent flailing. She has a reduced amount of kinetic tremor; she can get food to her mouth, use the telephone, and speak intelligibly. Although she can't really care for herself, she has come back to some interrelationship with the world."

A major problem with DCS for MS, he pointed out, "is that the frequency and amplitude of stimulation is so delicate that we spend a great deal of time on the telephone each day adjusting the stimulator levels for our patients; these levels may vary, in some cases, from day to day."

Dr. Cook has extended his work with DCS to such motor neuron diseases as amyotrophic lateral sclerosis. In one patient "there was an astonishing level of increased functional capacity."

Similar Improvements Seen

In other patients with similar problems, similar improvements have been seen, but much depends on the functional state of the anterior horn cells.

"This has significant impact when one realizes that nobody has ever been able to do anything for motor neuron diseases with progressive muscle atrophy."

He is also considering DCS implantation for severe paresis caused by traumatic spinal cord injury. "Based on testing with percutaneous electrical nerve stimulation in a patient with severe spinal cord dysfunction as a result of a skiing accident, we feel there may be some beneficial effect. It's worth a try."

Baboons Raise Own Blood Pressure, Heart Rate

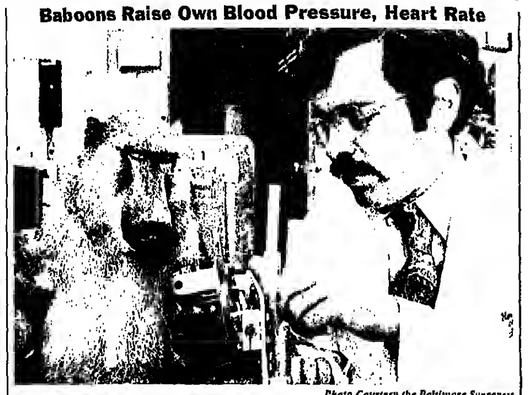


Photo Courtesy the Baltimore Sunpapers

Tests with eight baboons showed that they were able to raise their blood pressure and heart rate in response to food or electric shock, Dr. Alan Harris, of Johns Hopkins University, recently told an American Heart Association Seminar.

Real Work on Transfer Factor 'Just Begun'

Medical Tribune Report

NEW YORK—The New York University immunologist who discovered transfer factor nearly two decades ago summed up here the now-extensive evidence of its potency "as a restorative of cellular immunity" and received the kind of applause rarely heard at scientific meetings.

But Dr. H. Sherwood Lawrence also emphasized in discussions at the ninth Gustav Stern Symposium on Perspectives in Virology that there are still major gaps in knowledge about transfer factor.

No one is yet sure what it is or how it does what it does, he said. "The real work on transfer factor has just begun."

Dr. Lawrence defines the substance as a small nonantigenic moiety (molecular weight less than 10,000) that is separated from other macromolecules in human blood leukocytes by dialysis and concentrated by lyophilization of the dialysate. The safety margin is high, and comparatively large doses produce no significant side effects.

Studies have demonstrated that dialyzable transfer factor possesses all of the immunologic properties of the viable leukocytes from which it is prepared, he reported. It confers on the recipient for one to two years the delayed hypersensitivity responses and the cellular immunities possessed by the donor—or, in another descriptive phrase used by Dr. Lawrence, "memories of experience are conferred on the recipient."

Dr. Lawrence believes that transfer factor induces a new clone of T cells in the recipient. These antigen-responsive lymphocytes will then, by a mechanism still not understood, express all of the immunologic capacities of the naturally sensitive cell when they are exposed to the appropriate antigen.

Discussing transfer therapy of congenital and acquired cellular immune deficiency disease, Dr. Lawrence said that encouraging results are being achieved in the treatment of Wiskott-Aldrich syndrome, Swiss-type agammaglobulinemia, dysgammaglobulinemia, and some cases of disseminated infection, such as disseminated vaccinia, mucocutaneous candidiasis, coccidioidomycosis, and lepromatous leprosy.

Waste-Water Reuse Is Said to Pose Health Risk From Disease Organisms

Medical Tribune World Service

GENEVA, SWITZERLAND—The lower Rhine, water source for nearly 6,000,000 persons, often contains 40 per cent sewage and at low flow close to 100 per cent. Water from the Thames, which supplies two-thirds of Greater London, is contaminated with about 14 per cent sewage on average. In times of drought the only available water for the town of Agra, India, consists almost entirely of partially treated sewage from New Delhi.

These are some of the facts cited in a World Health Organization publication on methods of waste-water treatment and reuse. As the report noted, the use of sewage-polluted water for domestic purposes poses a serious health risk since such water contains all the disease organisms found in the source community.

The hazards of water pollution are magnified in industrial areas, where each year new organic chemicals find their way into rivers and lakes.

This Question of COPING

Anxiety and Coping Behavior

Fourth in a series which includes such topics as:
Competent Coping; Development of Coping Behavior;
Coping with the Changes of Adolescence; Coping with Cancer;
and *Coping with Cardiovascular Disease.*

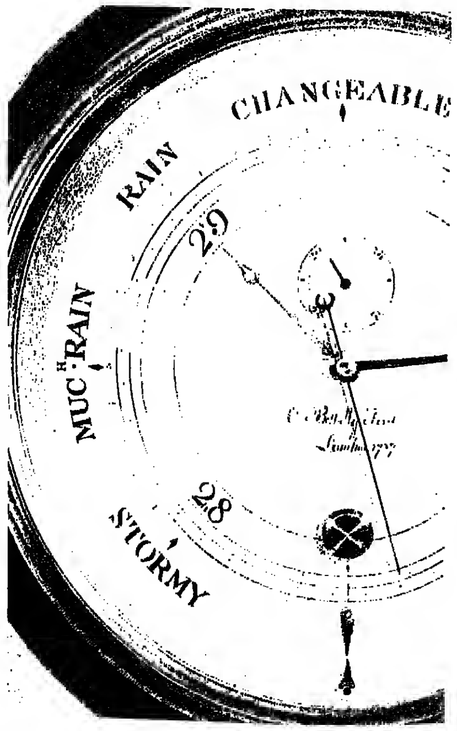
Anxiety–painful and unpleasant as it is– is a universal experience. How each person copes with it is a measure of that individual's mental health.

As a response to stress,[1] anxiety is a key ingredient in the coping process: it alerts a person to impending danger and maintains all the potential resources of the body and mind in readiness for emergencies. This normal alerting and facilitating anxiety puts us on guard against present and future disturbances so that we will not be overwhelmed by sudden excessive stimulations, or helpless in sudden critical situations.

Coping with anxiety is much like reading a barometer: there is very little we can do about changing the weather, but we can prudently observe the warning signals and protect ourselves from its extremes. On the other hand, we can ignore all warnings and attempt to ride out the storm—perhaps getting tossed or literally "wiped out."

How each person reacts to anxiety is as different as how each person perceives it. Fifty normal men and women were asked to relate how they felt about anxiety.[2] Their answers ranged broadly: "There is a sense of uncertainty about the future," "I have no appetite," "I try to stop thinking of the situation and try to think of other things," "There's a tension across my back," "I have a gnawing feeling in the pit of my stomach." No matter how anxiety is defined, each of us has two alternatives: to cope with anxiety and accept it as a signal—"I am feeling anxious now"; or to become overwhelmed and helpless in the face of mass stimulation—"I always feel anxious."

It is not the capacity to experience anxiety but what we get anxious about that determines whether or not anxiety is "normal." Furthermore, anxiety as perceived is relative in intensity, depending on how each of us has been shaped to adapt to stresses of life in the past—what has gone on, how we have reacted. In essence, anxiety is the consequence of each individual's peculiarly personal perceptions of the environment and of each person's internalized psychologic processes.



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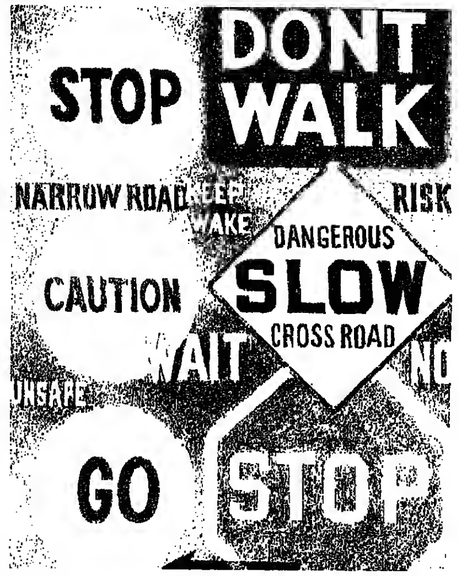
Anxiety in everyday life. The sources of anxiety–both internal and external–are increasing in our society, which for more than 25 years has been dubbed "The Age of Anxiety."



A common internal source develops when a person is confronted with two or more attitudes or drives which seem to be in opposition to each other, and between which easy choice seems impossible.[3] Another internal source of anxiety stems from feeling incapable of living up to the ideals set in early childhood by parents; still another, from anticipating that our actions will be opposed by someone personally significant. Basically, these are conflicts between internalized instructions and current motivations. They result in a nameless dread and foreboding, so characteristic of anxiety.

It is in our daily routine that we commonly find external sources of anxiety.[4] Examinations and other tests are a frequent focus of anxiety in young people who are particularly exposed to them —but rarely does the anxiety become so intense as to disrupt performance. Anxiety about dental treatment is widespread but short-lived, dropping off sharply after treatment. Stage fright too is a source of anxiety, occurring not only among actors but also in anybody who has to perform some action in public, at school or at work. Even experienced politicians confess to nervousness before making important public speeches—a nervousness which usually makes them more alert, goading them on to perform better.

These external sources of anxiety can be very useful; often without them we could not cope with the rapid changes in our everyday lives. We could not, for example, do something as relatively simple as crossing the street safely without being apprehensive and alert to the possible dangers of oncoming cars. Or, take a more stressful situation: in a group of serial combatmen surveyed, 50% reported that mild fear had a beneficial effect on their performance, and as much as 37% thought they performed their duties better even though they were very anxious.[4]

Yet, the difference between being anxious and too anxious is a thin line: while many in the anxious group performed better, too much anxiety in trainees and even in trained paratroopers was correlated with poor performance. Among the many normal situations in life—a promotion at work which means more pressure to perform well, the birth of a child which means new responsibilities—some events can raise the anxiety of an already anxious person beyond the point of tolerance. This is when anxiety can jeopardize the coping process.

Studies show that anxiety follows a course parallel to that of societal pressures which are imposed on individuals in an age-linked sequence.[5] Anxiety is seen early in infancy: there has been speculation that its precursors may first occur during the events of birth—which impose severe and difficult stimulations on the infant. Infants early develop the startle response—catching their breath, clutching with their hands, closing their eyes, puckering their lips and then crying—their way of coping with danger and anxiety.[6] This startle response is pre-emotional, but protective.[7] It is

This Question of COPING

the precursor of emotional reactions which become anxiety and fear. (Adults, too, have startle reactions: a pistol shot goes off unexpectedly, the body contracts, head jerks forward, eyes blink, shoulders draw forward. As in a reflex, we startle before we know what threatens us.)

Childhood anxieties are commonplace: in a group of 482 children, 40% reported that they had seven or more specific fears.[8] Yet children learn very early in life that reduction of anxieties is accomplished very largely by the people who take care of them. Even the infant learns to respond to absence or inattention on the part of these people as signs of danger, while their presence or attention takes on the power to reduce anxiety. A child's behavior is shaped at least in some degree to meet parental and cultural expectations; in turn, meeting these expectations gives the child a sense of security and reduces anxieties.

Proneness to anxiety is based on a person's preceding experiences. What may be a harmless situation for one can be a highly anxious one for another because of the complex ways in which, according to past experiences, the individual interprets the situation or transfers past emotions to it. A minor argument during a bridge game, for instance, may set off profound anxiety in one player because any suggestion of competition triggers associations connected with early competition with his sisters—a situation which was a great threat to his close dependency on his mother. The other bridge players would probably resolve the game-related conflict and resume playing, without anxiety.

No matter what the source of the anxiety, each of us has a particular way of feeling anxious—a way which is specific to the individual.[9] For some it is a lump in the throat, for others it is a headache, a sinking abdominal sensation, "butterflies in the stomach."

There are two basic kinds of physiological manifestations of anxiety:[10] those which a person can perceive, and those which the person cannot.

At the conscious level, the reactions most commonly perceived are shortness of breath and rapid beating of the heart. There is also a dryness of the mouth, tightness in the throat, loss of appetite, insomnia.

Other responses to anxiety, not subjectively perceptible, are brought about through the action of the autonomic nervous system. This is nature's way of enabling the body to mobilize itself to deal more effectively with threatened danger, either by fleeing from it or by fighting against it. Every system of the body is involved to some degree in this emergency mobilization. Some of the most outstanding of these responses are the outpouring of adrenal hormones, which in turn cause the liver to release glucose into the bloodstream so that the muscles will then have the glucose available for quick energy. The heart beats faster and blood pressure rises, thus pumping the blood with its oxygen, glucose and other nutrient supplies more quickly to the muscles and to the nervous system. At the same time, processes in the body that are not immediately useful for fight or flight—such as digestion or sexual desire—are likely to be slowed or inhibited. These reactions are not subject to conscious control; they happen automatically in anxiety states.

Another set of chronic physiological reactions set off by anxiety falls into the psychosomatic category: anxiety can provoke cardiovascular responses such as palpitations, can produce partial deafness (to drown out the world), chronic headaches and a whole host of ailments. Often these manifestations are called upon to replace unsuccessful psychological maneuvers.[11] Whether these physiological responses are part of the normal fight or flight preparedness or psychosomatically induced, researchers have clearly shown that each step down the ladder of self-esteem produces a larger proportion of physiological symptoms.[12]

The role of self-esteem. There is an obvious and inverse relation between the sense of competence and anxiety.

Stressful situations can be dealt with when they do not need to be feared; they cannot be handled competently through hesitant approaches, avoidance, feelings of awkward helplessness and lack of self-respect, all evidence of failure to deal with anxiety.[13] Maintaining and, if possible, enhancing our level of self-esteem is an essential element of competent coping.

By moving through anxiety-creating experiences, we achieve more self-awareness and individual freedom. The developing

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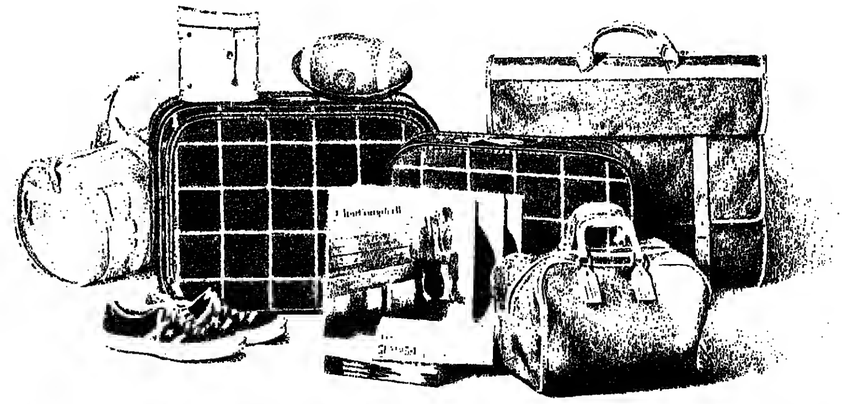


child, for example, experiences a progressive need to break the primary ties of dependence on parents—a break which always involves some anxiety. The healthy child overcomes this anxiety by a larger degree of self-direction and autonomy. But if independence from parents brings about an insupportable degree of anxiety—if the price of increased feelings of helplessness and isolation is too great—the child retreats into new forms of dependency. Anxiety, then, can constructively help raise the level of self-esteem, or it can destructively lead to self-derogation and a constriction of self.

It has long been believed that anxiety generates low self-esteem: it sets in motion a complex chain of psychological events which produces among other consequences self-hatred and self-contempt—neither of which fosters competent coping behavior. **Researchers now report that the opposite sequence may also occur: low self-esteem may generate anxiety.**[14] The association between anxiety and self-esteem was investigated in more than 5000 high school juniors and seniors in a random sample of 10 high schools in New York State. It was found that the low self-esteem persons had a shifting and unstable self-picture, and that they presented a false picture of themselves to the world. This is a very anxiety-producing situation: a person is always under the strain and fear of letting the guise slip. The low self-esteem group tended to be very sensitive to criticism, which they viewed as a threat testifying to their inadequacy, incompetence or worthlessness. Conversely, the high self-esteem highschoolers had fewer anxiety symptoms: they had stable and good self-images, they presented their true selves to the world and they felt less threatened by criticism.

The association between self-esteem and anxiety becomes cyclical: chronically anxious persons generally expect bad events to occur in situations involving potential threats to self-esteem. The extent to which a situation becomes threatening to self-esteem depends on our individual conceptions of our resources for mitigating or preventing harm—how much power we have over the threat—as opposed to helplessness in face of it.

An optimal range of anxiety. To facilitate action, we need to have a certain degree of anxiety.

Just how much anxiety we require varies with each of us, depending on our constitutional make-up, on our early environmental background, and on how we have learned to cope. What happens is that as anxiety increases responses are intensified to reduce that anxiety; but a point is eventually reached beyond which further increases in anxiety are associated with decreases in the anxiety-reducing responses. This is represented by the classic inverted U-shaped curve which relates drive (anxiety) to performance: for each task there is an anxiety level, both above and below which performance falls off.[15] For easy tasks, the optimum level is generally high; for difficult tasks it is low. However, we may be so anxious that we can only perform tasks which are very easy.

At the optimum level of anxiety for each individual, there is increased vigilance, increased sensitization to outside events and increased ability to cope with danger; this sensitivity continues at higher levels of anxiety, but the ability to differentiate the dangerous from the trivial becomes reduced. Also as anxiety mounts, we become less capable of mastering it: our behavior loses its spontaneity and flexibility, there is a general rigidification, and we respond in terms of the more habitual and hence safer tendencies. Anything novel is threatening and the ability to improvise is reduced: coping behavior is stymied.

This Question of COPING

Many aspects of anxiety can aid in the development of competent coping behavior.

Anxiety as a warning system.

What the normal or the "right" amount of anxiety does is make us aware of threats: it is an expression of self-preservation, a real and valid reaction to real danger. It is this alertness, this apprehension that keeps us keyed up psychologically. Without this our performance is often less efficient.[16] In the vernacular of the theater, we may "lay an egg." Indeed, psychoanalytic theory considers one type of anxiety to be "signal" anxiety because it functions as a warning, encouraging tentative preparation for mobilization of defenses against the breakthrough of overpowering, unacceptable or conflicting impulses. This signal anxiety is related to ego strength in that psychological conditioning in early life prepares us for adequate coping with a changing environment.

There are many aspects of anxiety that can aid in the development of competent coping behavior. Anxiety is adaptive, for example, in that it helps us cope by narrowing and focusing our field of attention, heightening our responsiveness to significant cues, reducing our responsiveness to more incidental cues.[17] Almost every step of growth and independence contains the seed of anxiety. Consider the classic case of going away to college. One such college-bound 18-year-old who was interviewed was obviously very anxious.[18] This was the first time she had ever been away from her family. As she spoke of leaving home, she revealed both her feelings of anxiety and her determination to become independent. She described how she had always been overprotected by her mother and three older brothers and said that, although it was hard for her to do it, she had decided it would be best for her to go to college in a distant city. She would have been relatively free of anxiety had she decided to remain at home; but she was not going to let a little anxiety stop her from developing into an independent young woman. Others, afraid of the anxiety of separation, might have remained at home, psychologically tied to mother and hearth forever.

Anxiety can also produce emotional inoculation—so called because it is somewhat analogous to what happens when antibodies are induced by exposure to mildly infectious viruses. Exposing a person to mild anxiety situations enables "normals" to increase tolerance for stress by developing coping mechanisms and effective defenses. Take the case of a group of 26 women smokers who were exposed to alarming information about the dangers of smoking.[19] In a psychodrama situation, an investigator played the role of a physician; each subject played a part of a patient suffering from the consequences of smoking. In one instance, the physician pointed out the x-ray indications of a malignant mass in the patient's lung, as he gave her the bad news that diagnostic tests indicated the presence of lung cancer. A controlled group was exposed to the same information, but instead of participating in the role playing, they listened to a tape recording of the session. In a follow-up study 18 months later, the psychodrama "patients" reported a significantly greater decrease in the number of cigarettes smoked than did the young women in the control group. Concludes the researcher: Under appropriate conditions, an anxiety experience may develop into a more adaptive attitude—an attitude that combines vigilance with high receptivity to precautionary recommendations.

Anxiety as a detriment. When signal anxiety fails to stimulate coping behavior, the overwhelming intensity of anxiety drives cannot be checked. This, according to psychoanalytic theory, results in or is described as traumatic anxiety,[16] or neurotic anxiety.[20]

Essentially, this kind of anxiety is a reaction to a threat which is disproportionate to the objective danger; it is managed by means of various repressions, defenses and retrenchment of activity and awareness.

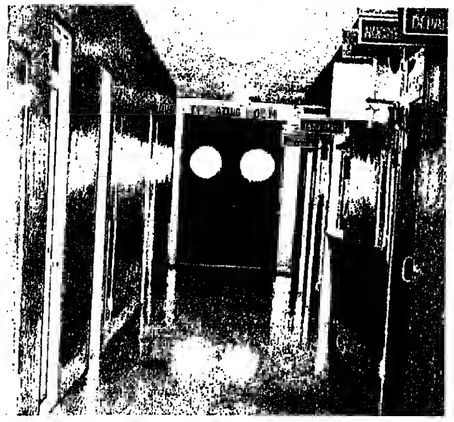
Traumatic or neurotic anxiety occurs when the incapacity for coping adequately with threats is not objective, but subjective—that is, is due not to objective weakness but to inner psychological patterns and conflicts which prevent the individual from using powers to cope.[20] These patterns are derived in part from situations of early childhood, when the child was not able objectively to meet the problems of a threatening situation, and at the same time could not consciously admit the source of the threat. Take the hypothetical case of a child on his first day of school. Billy, a 6-year-old kindergartener, has trepidations and conflicts about going to school. While he is eager for the new experience, he is also reluctant to leave his mother, or to free her to devote more attention to his baby brother. He expresses his anxiety through a mild sense of nausea, abdominal discomfort and a generally queasy feeling. He vomits in school, is sent to the nurse who comforts him. His mother is called to school; she too comforts and reassures him, gives him a new toy, ice cream and special attention. Billy has learned a way of dealing with his anxiety. If he repeats this expression of anxiety in a way that permits him to avoid school or other activities beyond the family, he creates a serious problem for his life-long style of dealing with anxieties: he establishes a pattern of getting sick as a way out of an intolerable anxiety-producing conflict.

ROCHE

Adaptation and maladaptation to anxiety situations. Too little as well as too much anxiety can hinder effective action, while a moderate amount of anxiety can foster competent coping behavior. Given the very same anxiety-producing situation, one person may cope competently while another may collapse.

Here are a few cases in which similar stress situations produced vastly different coping responses.

Surgical patients. A group of hospitalized men and women from the surgical floor were interviewed before and after their operations, to evaluate the impact of anxiety on surgical experiences.[24] Researchers found that the patients with low anticipatory anxiety—those who displayed no perceptible signs of fear or



Anxiety can also play a negative role in coping behavior when it interferes with thought processes. Some common complaints of anxiousness include: "I find it hard to keep my mind on a single task or job"; "I feel anxious about something or someone all of the time"; "At times I have been worried beyond reason about something that really did not matter." These statements all reflect intellectual and emotional preoccupation, an interference with concentration—and roadblocks to effective problem-solving.[21] When we are subjected to deep anxiety, we may begin to doubt our ability to perform even the most simple function. For example, two groups, in psychological testing, were asked to judge the length of certain lines.[22] The actual discrimination required was not difficult. However, the high-anxiety group showed many more doubtful judgments on lengths of lines, tending to be somewhat more hesitant and not trusting their own visual ability. In contrast, the non-anxious group scored significantly fewer doubtful responses.

High anxiety levels tend to impair academic achievement. In a test anxiety (TA) questionnaire administered to 305 Yale University liberal arts undergraduates, it was found that high aptitude students did well no matter what their anxiety levels were, and that low aptitude students, predictably, did poorly.[23] For the large middle intelligence group, academic achievement was impaired by high anxiety. The higher the anxiety score, the worse the student's performance. However, this effect tended to diminish the longer the student remained at Yale, suggesting that the student had learned to cope better with examinations generally.

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emotional disturbance during the period when they knew that they were scheduled to have an operation—often reacted with angry resentment combined with varying degrees of anxiety and depression postoperatively. Mr. R., a 33-year-old mechanic, hospitalized for a colostomy, asserted that he felt no concern about any aspect of his impending surgery. "I don't worry about it—I don't think about it at all. I figure it's not a serious operation." Following his operation, he displayed characteristic resentment. He had expected that after the operation he would have no pain at all, but to his dismay waking from the anesthetic was unexpectedly a disturbing and somewhat painful experience. His denial of the situation had tended to convince him that he would remain wholly unaffected by the surgical experience; instead, he was rudely subjected to the real pains and other stresses of the postoperative period.

Patients highly anxious preoperatively—those who report feeling continuously jittery and nervous about the impending operation, who have difficulty sleeping, difficulty concentrating on normal activities—continue to display a relatively high level of anxiety postoperatively. Mr. L., a 43-year-old salesman, was extremely fearful and agitated while in the hospital awaiting his abdominal operation, a cholecystectomy. Earlier, against the advice of his physician, he had postponed coming to the hospital. Throughout the entire convalescent period he felt continually worried about his physical condition and he displayed an unusually low ability to tolerate pain or discomfort. Like others with high fears before operations, he felt generally apprehensive, lacked confidence about recovering fully, and had adopted an attitude of resignation.

Now let us look at patients who showed only a moderate amount of anticipatory anxiety—those who had minor symptoms of emotional tension but who did not display outbursts of acute panic-like apprehensiveness. They were more like part-time worriers, occasionally preoccupied with fretful forebodings but quite capable of suppressing disquieting thoughts about the dire crisis that might be in store for them. Although those in the moderate fear group had as much postoperative pain as those in the other two groups, they showed a relative absence of emotional disturbances throughout the entire recovery period. Before an esophageal diverticulectomy, Mrs. R., a 62-year-old woman, verbalized numerous apprehensions about her health and the impending operation. The operation was needed, she said, to avoid "living a life of physical agony." And then there was the "mental agony from knowing it won't get better but might get worse if I don't have the operation." Postoperatively, Mrs. R. was highly cooperative in conforming to hospital routines, and while convalescing she kept saying how fortunate she was to have "doctors that are the tops." While Mrs. R. did a considerable amount of mental rehearsing of potential dangers, her rehearsal led her to a high degree of awareness of reassuring features as well as of threatening ones: "There will be pain but it won't last long." In contrast, the low-anxiety patient was angry to discover he was in pain and the high-anxiety person complained of pain constantly. Conclude the researchers: The arousal of anticipatory fear and anxiety plays a causal role in the development of psychological stamina. In general, studies of this sort have shown the usefulness of psychological preparation.

Paratroopers in training. A group of paratroopers was tested for pre- and postflight anxiety levels, to examine the role played by anxiety in performance and in the ability to perform.[45] One 19-year-old boy, subject P.D., was given an initial anxiety rating of 0. He had little capacity for communication with himself or others, partly because of his limited cultural background (he had never graduated from high school in a small Georgia town), and partly because of his distinctive personality characteristics. At first he could not recognize his anxiety, although he was scared almost every time he jumped from a plane; his performance was rated poor. On one occasion he stated that he was doubtful he could jump again. It was at this time—when he could admit his anxiety overtly—that P.D. began to improve in his paratrooper training. It seems that the psychological loosening of this very tightly defended person—although accompanied by anxiety—facilitated his

adaptation to stress: being able to discuss his concerns openly, he could reach out for advice and support from others.

Another jumper, P.K., showed a reciprocal relationship between anxiety and action in that during action his anxiety decreased. This bears out an old observation re-experienced by almost everyone: A high level of anticipatory anxiety is sharply reduced when action begins, especially if the actual stress is less than expected; as a result, during stress there is often an improved level of functioning. Thus, observed the researchers, a high level of anxiety elicited during a prestress interview may not be correctly predictive of a breakdown but rather an intensification of a danger signal.

The case of 18-year-old M.C. was characterized by his refusal to jump. The first day of training he reported that he wanted to jump but that his legs would not perform. The next day he was given another chance but was unable to accept it and quit his training, stating that his freezing was due to fear of heights. During an interview it was discovered that M.C. always tried to get into situations that would enable him to feel competent, although it seemed that these situations always produced feelings of great anxiety. He thought, for example, that his chances of getting through training were pretty good: "If a lot of these guys can make it, I think I can," he said with bravado. It was felt that his long-standing anxiety—he freely admitted having intense anxiety and his anxiety was rated higher than any other within all the groups—was worsened in the present situation. It was found that the men who failed training generally showed more stress responses on various measures. Commonly, they had not developed effective coping patterns, they had not developed a deep competence in any sphere, and they felt consistently vulnerable.

A.B. was a shy, insecure and self-conscious person who joined the airborne because an older brother had been a paratrooper. He was uncertain, easily embarrassed in relationships with others. During the base training period he remained by himself, did not buddy up with other trainees. By chance, an officer took a liking to this soldier, offered advice and praised him for efforts whenever his performance showed even small improvement. Midway during training week one, he received his first rating of "satisfactory" on a jump. At the same time, his behavior changed drastically; he became much more outgoing and began to interact with his buddies, especially through humor. For this soldier, the airborne trainings, though initially stressful, turned out to be therapeutic. Stressful experiences are difficult, but they have high potential for promoting personal growth.

Disabled young men. Two high-school boys were both in excellent health until their accidents: Basil was in a truck which overturned and he was totally paralyzed below the waist; Tony was rendered immediately a quadriplegic with only minimal gross hand function, the result of a diving accident which occurred while he was on vacation. The reactions of these teenagers to the acute anxiety of their situations and their development of new patterns of behavior were studied.[46]

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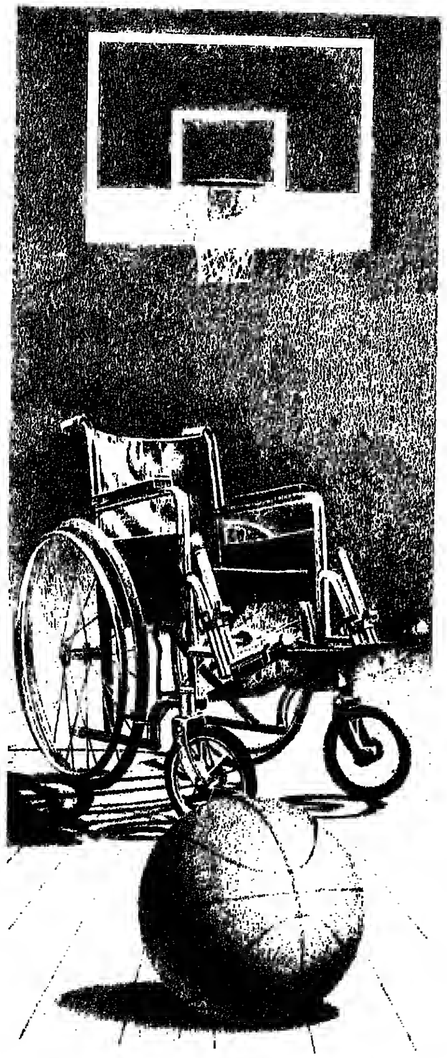
During the early part of his hospitalization, Basil expressed the firm conviction that he would walk again and initially he cooperated with the physical therapy program. His father was silent and apparently uncomprehending of his son's condition; his mother held magical expectations of his recovery. As disappointments occurred in rehabilitation therapy, Basil began to withdraw. He was no longer willing to work on rehabilitation therapy, neither was he cooperative with attempts to have a teacher work with him at the hospital. When the fall came and friends who had visited him during the summer departed for college, Basil became overtly depressed and more uncooperative. Pain without clear organic basis became almost constant and the patient spent much time in bed. After being discharged he eventually graduated from high school, had vague vocational plans but did nothing specific to pursue them. Basil apparently kept clinging to the hope that he might walk again.

Tony, a 17-year-old, was an athletic high school junior, active on the basketball team. On admission to the hospital he expressed the hope that he would walk again. His parents said they shared his hope—but despite their verbalized denial, they adjusted behaviorally to their son's condition by placing ramps in their home and widening doorways to accommodate a wheelchair. While still in the hospital Tony cooperated with rehabilitation personnel and managed to finish his junior year with the help of a visiting teacher. While he became periodically depressed over his vocational future he was able to discuss his depression with the rehabilitation staff. Initially he thought of pursuing his hobby of T.V. and radio repair, but physical limitations prevented him from performing the mechanical aspects of this work. In the hospital he became interested in history; after his release, he graduated from both high school and college. He then taught history in a high school, and fulfilled his interest in sports by coaching a local boys' club basketball team from his wheelchair.

Both Basil and Tony used defense mechanisms in the early part of their hospitalization as a highly adaptive method of buying time during the acute phase of their anxiety. But where Basil never could adapt to his disabled situation, Tony eventually managed his difficulties and coped with his anxiety. Basic to Tony's coping with his permanent disability was his awareness and acceptance that he was no longer sick—but different and limited. Only by working out a new basis for self-esteem that does not rest on physical prowess can the disabled, such as Tony, cope effectively with their affliction.

These three types of cases—surgery patients, paratroopers in training and disabled young men—show that specific coping strategies can be developed to handle major challenges of anxiety, but that excessive anxiety can jeopardize development of coping behavior.



The basic idea behind all of the therapies available is to help each of us cope with our problems on our own initiative, and in our own way.

Relieving excessive anxiety.

Most of us try to deal with anxiety as best we can. At times we can do this with relative ease; at other times our anxiety mounts to uncomfortable proportions, until perhaps some fortuitous happening—a changed relationship, a different job, a vacation—helps ease the anxiety. At still other times, we can see no way out.

It is not the anxiety itself but the way we handle it that constitutes the difference between emotional sickness and health. Perhaps the easiest method for dealing with anxiety—but clearly not the best in the long term—is the use of defense mechanisms.[27] Avoidance of anxiety is often useful, but the price of persistent avoidance is likely to be the exclusion of new learning and the stunting of capacities to adapt to new situations. Other defenses such as laughter, compulsive working, frantic activity of any sort may serve to relieve the anxiety. But again, these maneuvers tend to be of short-term value: if sustained over many months, they may distract attention from the problem that has triggered the anxiety, obscuring it and thereby making its solution more difficult.

Instead of avoiding or repressing anxiety, a constructive way of dealing with anxiety is to confront it—to treat anxiety properly as a warning. Basically what this calls for is the use of cognitive functions, an open-minded assessment of the situation. Take the case of a young woman who was anxious about being accepted for college.[28] She had applied to several colleges, and much to her amazement was accepted by both "top" choices on the same day. Initially she was quite elated but soon she became extremely anxious as she faced the problem of making the choice between these two colleges. Within a few days, she grew almost obsessed by her dilemma and had difficulty sleeping and eating. She spoke with a counselor, pleading for someone to tell her which school to go to. Finally she recognized that no one but herself could make this choice. She decided to visit both schools and then make a direct personal evaluation. She spent time at both schools, visited the facilities, talked with some of the students and faculty. As a result of this expedition, she no longer judged the two colleges equal in relation to her interests, and she was easily able to choose one of them in preference to the other. As soon as she made this reality-based decision, she experienced a marked reduction in her anxiety.

Although there is some controversy over how we become repressors of anxiety—using a variety of avoidance mechanisms or sensitizers, approaching the threat and attempting to overcome it—some psychologists suggest that we are capable of both types of behavior.[29] Sensitizing behavior will occur when we face an anxiety-provoking situation which we feel able to handle. But if we face an anxiety-provoking situation which we feel to be overwhelming, then we may repress or distort the threat in some way so that it seems less severe. A student may not have any problems writing a three-page paper. The same student may have great anxieties and accordingly avoid work on a long, difficult term paper.

There are many forms of therapy for dealing with anxiety, ranging from long-term psychoanalysis to shorter-term therapies. In part, what these therapies do is give a person an opportunity to vent feelings. As deep feelings are expressed, often there is a relief of anxiety symptoms. Pharmacological therapy is also useful in some cases to lessen the level of anxiety to the point where a person can begin coping. While psychotropic drugs can facilitate communication with anxious persons, drug therapy is not directed at the problems of living that have triggered the anxiety. Accordingly, it should be used in cases of relatively intense anxiety as a temporary measure—a holding operation—to help the person get his or her coping responses underway.[30]

The basic idea behind all of the therapies available is to help each of us cope with our problems on our own initiative, and in our own way. Often this means helping us restore previous coping patterns that have been temporarily disrupted; sometimes it means helping us work out new patterns for dealing with problems unprecedented in our previous experience.

Anxiety is a difficult and distressing experience. But it is also a special opportunity for new learning and personal development.

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Roche Laboratories is privileged to acknowledge David A. Hamburg, M.D., as over-all consultant to this series.

Chairman of the Department of Psychiatry, Stanford University Medical Center, Stanford, California, from August 1961 until October 1972 when he left administrative duties to pursue his research and teaching at Stanford, where he is now the first holder of the Reed-Hodgson professorship in human biology and psychiatry. Doctor Hamburg is eminently qualified to oversee the series. He has written many published papers on the subject of coping behavior, helped to edit a comprehensive behavioral sciences bibliography, *Coping and Adaptation*, published by the National Institute of Mental Health, and served as Chairman of an interdisciplinary research conference on Coping and Adaptation held at Palo Alto in 1969 and as co-editor of a book, *Coping and Adaptation*, now in press.

Roche Laboratories is privileged to acknowledge Roy R. Grinker, Sr., M.D., as consultant to this particular issue.

Chairman of the Department of Psychiatry and Director of the Institute for Psychosomatic and Psychiatric Research and Training at the Michael Reese Hospital and Medical Center, and Professor of Psychiatry at the Pritzker Medical School of the University of Chicago. Dr. Grinker has written some 240 papers and 15 books, including "Psychosomatic Research," "The Phenomena of Depressions," "The Borderline Syndrome" and, with Dr. John P. Spiegel, "Men Under Stress," dealing with coping under war conditions. He is now engaged in an intensive and extensive research program on schizophrenia.

. . . a grid against which the primary physician can assess the adaptive strengths and weaknesses of his patients. In the light of this appraisal and against the highly varied backdrop of what constitutes competent coping and how it may develop and mature, he can then suggest and monitor relevant pathways for constructive change and action.

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Doctor's Debate Cont'd

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neurological surgery and something approaching 1,500 lumbar disks operated leads me to the conclusion that early writers on the lumbar disk problem, such as Spurling, Semmes, and many others, are still correct in their emphasis on clinical diagnosis of surgical disk patients and the unreliability of myelography. I find that all too many of the younger neurosurgeons and most orthopedic surgeons who do disk surgery seem to feel that myelography is how one finds out "if the patient has a disk." This approach inevitably leads to operations on patients who don't have a herniated disk or are otherwise poor candidates for surgery. There are also other problems which must be recognized and appropriate management selected if the best results are to be achieved.

At least 90 per cent of my patients return to their former occupation without material residual symptoms. I find little difference in the compensable and noncompensable patients except in the degree to which the compensable patients emphasize their minor residual complaints. This correlates with studies done by Hamby and others years ago.

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Metapsychiatry and Noah Webster

The communication concerning "metapsychiatry" by Dr. Stanley R. Dean which appeared in the December 12, 1973, issue of MEDICAL TRIBUNE merits a response.

The statement was made therein that the term "metapsychiatry" was used to "designate the interface between psychiatry and mysticism." Later in the communication it appears that the word "mysticism" was used to encompass various aspects of the occult and of the psi phenomena. In the matter of semantics, it is important to define "mysticism."

In Webster's Third International Dictionary the word "mysticism" is defined as follows: "1. The experience of mystical union or direct communion with reality reported by mystics 2. a theory of mystical knowledge: the doctrine or belief that direct knowledge of God, of spiritual truth, of ultimate reality, or comparable matters is attainable through immediate intuition, insight, or illumination and in a way differing from ordinary sense perception or ratiocination 3. vague speculation; any theory postulating or based on the possibility of direct and intuitive acquisition of ineffable knowledge or power."

The use of the psi phenomena by the physician has long been considered to be outside the pale of medical ethics for the reason that the practicing physician is admonished in the Code of Ethics to practice his profession in a scientific manner. For the physician to do otherwise would be construed by the pontiffs of medicine to be in the nature of quackery. As a result, the field of the psi phenomena has been left largely to various exploiters, who have not hesitated to use it to their personal advantage.

I am very convinced that there are many physicians who are quite adept in the use of psi phenomena but who are very reluctant to admit to this fact. At the present time the psi phenomena are considered to be metaphysical, rather than being scientific, in nature. But it has become apparent to the writer that it is very difficult to draw the line between the utilization of the psi phenomena in making diagnoses which would tend to increase the diagnostic acumen of the clinician to the point where subliminal inputs are processed very rapidly and often without conscious awareness concerning the process.

The physician is supposed to treat the mind and the body that are diseased, but how may it be possible to define the word "mind" in any way that would be other than by a metaphysical concept? Or for that matter, where is the psyche; what are its physical characteristics; and what is the nature of its physiology?

It is not the intention of the undersigned to be negativistic in the matter of the possibility of the acceptance of the psi phenomena by the ecclesiasts of the medical profession, but one should not fly in the face of four decades of one's experience by acting in the manner of the schizophrenic person by making the assumption that these self-appointed guardians of medical orthodoxy would not demand ample documentation by means of laboratory tests and by other means of scientific proofs in order for any physician to be able to escape the opprobrium of such persons, who would not hesitate to apply sanctions against the proponents of such heresy. It would appear that there are such individuals who appear to have forgotten the Velikovsky Heresy, which has not yet been resolved.

Would the insurance companies be willing to accept such proponents of a medical heresy as being good risks in the matter of malpractice? What physician would care to defend himself in a court of law on the basis of his ability in matters that concern the psi phenomena?

It would appear that at this moment the climate is not right for the promulgation of metapsychiatry as an accepted modality for diagnosis or for therapy in psychiatry.

CONRAD A. LOEHNER, M.D.
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Blue Cross Declines Payment to Outpatients

Continued from page 1

patients $138 a day for a room and the hotel charges are less than one-third of that, Dr. Galin asked Blue Cross to pay for the hotel room.

Blue Cross refused.

Dr. Galin recounted his meeting with Blue Cross's Dr. Peter Rogatz for MEDICAL TRIBUNE: "Dr. Rogatz was very honest. He said, if you have 20 beds but you use only 10 and put another 10 patients in a hotel, you can still fill your 20 beds from the pool of unnecessary admissions or from longer stays.

"He said that Blue Cross would be happy to pay for hotel bills if we simultaneously reduced the number of beds in the hospital."

Dr. Galin then went to Flower Fifth Avenue's administrators and asked them to close beds.

"They wanted literally to kill me" after hearing the suggestion, he related. "But the patient would get much better medical care on an outpatient basis because I do them a lot more good in my office, where I have all the equipment, than I do when I walk into their rooms in the hospital."

Tendency to Fill Beds

Dr. Rogatz confirmed the discussion with Dr. Galin and told MEDICAL TRIBUNE that if outpatient surgery costs were to be covered by Blue Cross, the surplus of inpatient facilities would increase—and "where there is a surplus of beds there is a tendency to fill them, willy-nilly, and to do unnecessary surgery.

"We're going to have to close some inpatient surgical facilities. My whole position with any doctor or hospital is that we'll look for a way to finance outpatient surgery if you'll look for a way to cut inpatient service.

"For instance, set up an ambulatory care program right in the space where the [excess] beds are."

But he admitted that Blue Cross has been unable to convince local hospitals to close surplus facilities.

Nor has it been exceptionally successful in reducing unnecessary hospitalization, because "we may know we're being sold a bill of goods but we can't prove it. The doctor can cook up [reasons] to justify hospitalization, and if we deny payment, it's the patient who becomes the victim."

The president of the national Blue Cross Association, Walter J. McNerney, told MEDICAL TRIBUNE that outpatient surgical procedures and separate facilities for such surgery "are desirable to the extent that they are qualified facilities and not additional to existing beds. They should substitute for hospital beds.

"But I doubt whether we're going to pay for motel rooms. The lack of control over a situation like that is obvious.

"There is a need for [effective] legislation to control the number of beds."

"We have not recognized the damage to the public health that is done by the existence of unnecessary beds," Dr. Rogatz warned, adding, "Proper regulatory authority ought to exist."

"I recognize the merits" of Dr. Galin's proposal, and "we will look at it very seriously," he said.

Osteosarcoma: Transfer Factor Prolongs Lives

Continued from page 1

Stern Symposium on Perspectives in Virology.

Lymphocytes from osteosarcoma patients themselves, as expected, showed minimal cytotoxicity to cells in tests.

Of more than 60 normal controls—persons who had not had household contact with osteosarcoma patients (although some were from households containing patients with other types of malignancy)—only one had lymphocytes with significant cytotoxicity for osteosarcoma cells, and this person was an undertaker.

By contrast, approximately 20 per cent of the close contacts of the osteosarcoma patients had cellular immunity to osteosarcoma cells but not to any of the control cells used in the tests (matching fibroblasts, fibrosarcoma cells, and hypernephroma cells).

Dr. Fudenberg said the study also demonstrated the potential value of transfer factor in treating these patients and provided a guideline for better selection of donors.

The cytotoxicity assay used to test lymphocytes was developed by Dr. Alan S. Levin, a coinvestigator at the medical center. Tumor cells to be tested are labeled with Cr^{51} and then incubated with donor lymphocytes. Cell killing is measured by chromium release.

A chromium release greater than 35 per cent was the criterion for cellular immunity. This significant cytotoxicity was observed in 20 per cent of close contacts of patients. Some of these normal donors had greater than 50 per cent chromium release, while fewer than 1 per cent of the controls showed a release of more than 7 per cent.

Treatment of osteosarcoma patients with the tumor-specific transfer factor obtained from "hyperimmune" donors causes a rise in cytotoxicity, the investigator said. Since maximum activity is the goal of therapy, a 50 per cent release is now considered the minimum for donor material.

Isotope Scanning Provides Details Of Acute Infarct

Continued from page 1

atable tetracycline labeled with technetium^{99m}. In dog studies, using a acintillation scanner, the investigators found that the concentration of the radioisotope within infarcted tissue could be detected as early as four houra after infarction. At 24 hours the concentration reached in the necrotic myocardium is "seven times higher than in the normal ventricle," the group reported.

The clinical series at Peter Bent Brigham Hospital included 20 heart patients in a coronary care unit and eight patients with no evidence of chronic or acute ischemic heart disease who served as controls. Fourteen of the CCU group had clinical evidence of an AMI, including 10 with transmural infarctiona and four with a nontransmural infarct. The CCU patients were studied at bedside, following intravenous injection of the labeled tetracycline, within 24-48 hours of admission.

No Focal Myocardial Uptake

"In the 28 patients without evidence of cardiac disease," said Dr. Holman, "no focal myocardial uptake was seen 24 hours after intravenous injection of T^{99m}-tetrscycline. Focal uptake of [the labeled antibiotic] wss present in all 14 patients with evidence of acute transmural or acute nontransmural infarctions on the initial examination 24 hours after injection."

In five patients with an equivocal diagnosis, the scan was normal in three; it was normal also in one patient with a final diagnosis of recurrent arrhythmia.

Dr. Holman explained that scans made earlier than 24 houra after injection were unsatisfactory because the blood levels of the circulating tagged antibiotic were still too high to permit accurate separation of the cardiac pool from the area of infarction.

"It was only on the 24-hour scintiscan, when blood levels had fallen to less than 25 per cent of the injected dose, that focal areas of increased T^{99m}-tetracyclina in tha myocardium could be accurately identified."

A significant finding was the observation that focal myocardial activity was maximal at between one and three days after the onset of chest pain and could not be detected at three to 15 days. The finding suggests that the test is useful in distinguishing a fresh infarct from an old one, Dr. Holman said.

Coauthors were Drs. Guillermo A. Cook, Michael Lesch, Franklin Zweiman, and John Temte; Mrinal K. Dewangee, Ph.D.; and Drs. Bernard Lown and Richard Gorlin.

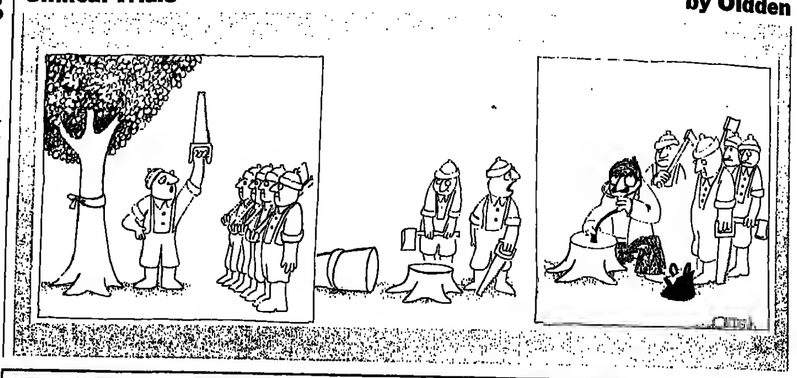
Abortion Policy Stands

Medical Tribune Report

LAKE SUCCASS, N.Y.—The Medical Society of the State of New York baa reaffirmed its 1970 position that all terminations of pregnancy beyond the 12th week should be performed only in a hospital on an inpatient basis.

Clinical Trials

by Oldden



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our children and their children, it is essential that the emotionnlism about abortion and other forms of conception control be superseded by the common sense necessitated by the cold, hard facts.

C. ROBERT SWANBECK, M.D.
Fresno, Calif.

Belling the Gun—1

According to Dr. Stefan A. Pasternack ("Current Opinion," January 23) "the general availnbility of hnudguns facilitates violent crimes." Likewise, the general availnbility of intoxicnnts facilitates the abuse of the use of intoxicants; or again, the general availnbility of automobiles facilitates the death on the highways, and so on.

The problem of abuse of use cannot be solved by confiscating or restricting the object or material man uses to abuse himself or others. The first recorded violent crime was perpetrated by Cnin. Did Cnin murder his brother because there was a stone or club nenrby? (Scripture does not elabornte.)

Man has come a long way since the time of Cain, but he continues to do himself in because of his own perversity.

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Belling the Gun—2

Dr. Stefan A. Pasternack's article on "Handguns and Homicide," while informative, does not mention, curiously, a single word about proper training in firearm safety for owners of guns and control of those who should not own guns.

We hear daily, "Hand guns kill more friends than enemies." Many responsible citizens keep their children away from firearms "to make it a safer world for children." Is this trend indeed safer —can recent history teach us anything?

Maj. Spencer Chapman, who fought in Malaya in World War II, reminisces in his excellent book *The Jungle is Neutral* on the profound bewilderment and inadequacy for armed resistance of the Malay, once fierce warriors, who had been trained by the British Colonial Administration to pacific submission.

On the other hand, confronted with protracted warfare, the gentle and peaceful Vietnamese, who were thought by the French to be totally lacking in soldierly behavior, proved themselves otherwise. Would 6,000,000 Jews have perished had they had the know-how of the contemporary citizens of Israel?

For the moment, it is not likely that firearms or violence will be eliminated from among us, and it is reasonable to conclude that those who so desire should be provided with adequate teaching and training in the safe and lawful handling of firearms.

Outlawing firearms has not worked out to provide peace in Northern Ireland. Outlawing firearms would have doomed Israel at its birth.

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Greece Begins Drive On Echinococcosis

Medical Tribune World Service

ATHENS—Greece has launched a nationwide educational campaign to alert the public to the danger of echinococcosis.

The extension of hospital services has revealed that the number of persons infected with the larval form of Echinococcus granulosus has been increasing in the last 10 years. Latest figures show that Greece's incidence of surgical cases, around 17 per 100,000, is the second highest in the world, exceeded only by Uruguay's 18.2 per 100,000.

The high morbidity in this country is attributed mainly to the great number of sheep and dogs, the high rate of their infection, and the lack of intensive control measures. The only known host of E. granulosus, Greek health authorities said, is the dog, and, as an intermediate host, the sheep tops the list of domestic animals.

Medicine on Stamps

N. A. Semashko

Nikolai Alekaandrovitch Semashko (1874-1949), famous public health worker, was honored by the Soviet Union with a stamp in 1964. His political interest in the health welfare of workers in the Orlov and Samare regions caused his expulsion after the 1905 revolution. He worked with Lenin in Switzerland, returning to Russia in 1917 for active participation in the Revolution. Under Lenin and, later, Stalin, he served as the People's Commissar of Public Health and organized the Soviet Public Health System.

Texts: Dr. Joseph Kler
Stamps: Minkus Publications, Inc., New York

The patients were veterans who thought all their battles were over...